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**Ground-Water Monitoring at  
the Hanford Site,  
January-December 1984**

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## SUMMARY

Operations at the Hanford Site since 1944 have resulted in the discharge of process cooling water and other waste waters to the ground. The primary discharges have occurred within or near the 200 Areas located in the center of the site. These effluents, which have percolated to the unconfined ground water, contain low levels of radioactive and nonradioactive substances. The Pacific Northwest Laboratory Ground-Water Monitoring Program monitors the concentrations of these constituents in the unconfined aquifer and evaluates their impact on people and the environment.

During 1984, 339 monitoring wells were sampled at various times for radioactive and nonradioactive constituents. Two of these constituents, specifically, tritium and nitrate, have been selected for detailed discussion in this report because: 1) they are more readily transported within or by the ground water with little or no attenuation, 2) they are readily detectable, and 3) they are present in most of the waste streams and are therefore indicative of the movement of contaminated ground water from waste disposal operations. Transport of these constituents in the ground water has resulted in the formation of plumes that can be mapped by contouring the analytical data obtained from the monitoring wells. The plumes change with time in response to ground-water flow, dispersion, diffusion and radioactive decay. This report, which is one of a series prepared annually to document and evaluate the status of the ground water at the Hanford Site, describes recent changes in the configuration of the tritium and nitrate plumes as a result of previous operations.

Tritium and nitrate in the primary plumes originating from the 200 Areas continue to move generally eastward toward the Columbia River in the direction of ground-water flow. The movement within these plumes is indicated by changes in trends within the analytical data from the monitoring wells. No discernible impact on ground water has yet been observed from the start-up of the PUREX plant in December 1983. The shape of the present tritium plume is similar to those described in previous ground-water monitoring reports, although slight changes on the outer edges have been noted. These changes have primarily resulted from addition of new

sampling points or the map relocation of monitoring wells following a resurvey of their positions. The nitrate plume is different in shape from those depicted in previous reports because of a change in sample analysis procedure, during calendar year (CY) 1984, from the Phenoldisulfonic Acid Method to the Specific Ion Electrode Analytical Procedure.

Radiological impacts from two potential pathways for radionuclide transport in ground water to the environment are discussed in this report. The pathways are: 1) human consumption of ground water from onsite wells, and 2) seepage of ground water into the Columbia River. In 1984, the annual whole body dose received as a result of drinking the ground water at the Fast Flux Test Facility (FFTF) was calculated by the Hanford Site dose model. The calculated dose was 0.46 millirem, based on an occupational ingestion rate of 250 l/yr and a dose commitment of 50 years. This estimated whole body dose is less than 15% of the Washington State dose standard of 4 mrem per year. Three other site locations, where ground water is used for drinking water, had lower radionuclide concentrations.

Concentrations of tritium in spring samples that were collected and analyzed in 1983, and in wells sampled adjacent to the Columbia River in 1984 confirmed that constituents in the ground water are entering the river via springs and subsurface flow. The primary areas where radionuclides enter the Columbia River via ground-water flow are the 100-N and 300 Areas and the shoreline adjacent to the Hanford Townsite. Because of the difference in river and ground-water flow rates, the ground water entering the river is diluted by several orders of magnitude. In 1984 the concentration of tritium in the Columbia River contributed by ground-water seepage along the Hanford Reach of the river was low compared to background concentration from worldwide fallout and other sources (5 pCi/l from the ground water versus  $130 \pm 15$  pCi/l background concentrations). Strontium-90 concentration in the Columbia River from the 100-N Area springs was .07 pCi/l. This is negligible when compared to the Environmental Protection Agency (EPA) and State of Washington Drinking Water Standard of 8 pCi/l  $^{90}\text{Sr}$ .

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## INTRODUCTION

Ground-water monitoring at the Hanford Site is a facet of the Hanford Environmental Monitoring Program, which is conducted by the Pacific Northwest Laboratory (PNL) for the U.S. Department of Energy (DOE). This comprehensive program is designed to evaluate existing and potential pathways of exposure to radioactivity and hazardous chemicals from site operations. The objectives of the ground-water monitoring portion of this program are as follows: 1) measure and report the concentration and distribution of radioactive and other chemical constituents in the ground water, 2) determine the movement and transport of constituents with time, and 3) evaluate the impact of ground-water contamination on people and their environment.

To achieve these objectives, the ground-water samples are collected and analyzed and the results are then interpreted. Through the program, technical studies are performed that provide additional information on the ground-water system and on the behavior of constituents within the system.

Each year, data collected by the Ground-Water Monitoring Program are evaluated, summarized,

and published in an annual report. This document contains an evaluation of data collected during CY 1984. The primary purposes of this report are to describe the concentration and distribution of various constituents in the ground water and to assess their potential impact on the public and the environment. In addition, the report describes the results of special supporting technical studies conducted in 1984.

Additional information on environmental monitoring at the Hanford Site may be found in other reports issued annually. The most recent titles are:

- *Environmental Monitoring at Hanford for 1984* by Price et al. (1985),
- *Environmental Status of the Hanford Site for CY 1983* by Price et al. (1984),
- *Results of the Separations Area Ground-Water Monitoring Network for 1983* by Law and Allen (1984), and
- *Rockwell Hanford Operations Effluents and Solid Waste Burials During Calendar Year 1983* by Tanner et al. (1984).

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## SITE DESCRIPTION

The Hanford Site, which is operated by DOE, is located in southeastern Washington. The site, shown in Figure 1, occupies 1,476 km<sup>2</sup> (570 mi<sup>2</sup>) of the semiarid Pasco Basin. The site receives approximately 16 cm (6.3 in.) of precipitation annually, of which about 40% occurs during the winter months. During calendar year (CY) 1984, the Hanford Meteorological Station recorded a total precipitation of 18.5 cm (7.3 in.), over 15% above average. The desert plains on which the site is situated rise gradually from an altitude of about 400 ft above mean sea level (msl) in the southeastern part of the site to about 700 ft in the northwestern part (Newcomb, Strand and Frank 1972). Along the western boundary and in the center of the site, basalt ridges rise above the plains. The Columbia River flows through the northern part of the site and forms part of its eastern boundary, and the Yakima River flows along a portion of the site's southern boundary. The cities of Richland, Pasco, and Kennewick, known collectively as the Tri-Cities, are situated on the Columbia River downstream of the site and have a standard metropolitan statistical area population of about 144,000 (Watson et al. 1984).

The concentrations and distribution of constituents in the ground water are affected both by site activities and by properties of the underlying materials. Therefore, brief discussions of these subjects are contained in the following sections.

## SITE OPERATIONS

The Hanford Site was established in 1943 under the Manhattan Project to produce plutonium for nuclear weapons. At one time, nine production reactors were in operation at the site, but only one of these (N Reactor) is currently operating (see Figure 1). The N Reactor, located in the 100-N Area, is a dual purpose reactor, producing both plutonium for weapons and steam for power production. Another onsite reactor, shown in Figure 1, the Fast Flux Test Facility (FFTF), is used for research. At present, the main DOE-sponsored activities at the site include reactor operation, fuel fabrication and reprocessing, waste management, and energy-related research and development. Other facilities located on portions of the Hanford Site, leased by the State of Washington, include the

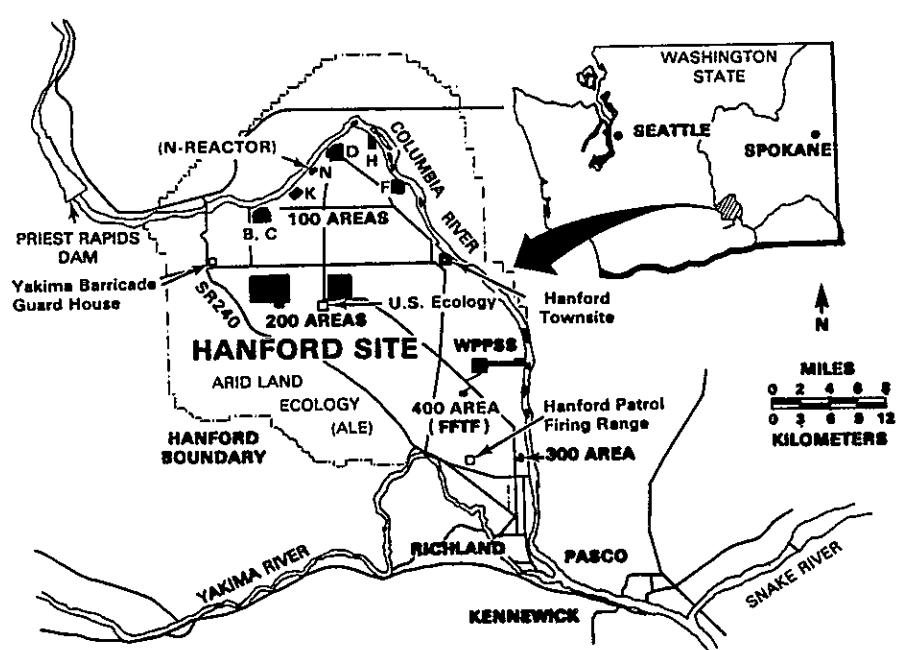


FIGURE 1. The Hanford Site

Washington Public Power Supply System (WPPSS) generating station adjacent to the N Reactor; the operational WPPSS #2 and mothballed #1 and #4 power reactors; and a burial site, operated by U.S. Ecology, for commercially generated low level radioactive waste (Figure 1).

The DOE operations onsite have resulted in the production of large volumes of waste water. Over  $1 \times 10^{10}$  gal of liquid effluent was discharged to the ground in CY 1984, including process cooling water and water containing low-level radioactive wastes. Subsurface structures, such as cribs, have been used for disposal of the water containing radioactive wastes, while surface ponds and ditches have been used for the disposal of the uncontaminated cooling water (Graham et al. 1981). These disposal facilities are located at the various operating areas shown in Figure 1, including the 100 Areas, 200 Areas, and 300 Area. The majority of waste water has been released through disposal facilities at or near the Chemical Separations Area (includes 200 Areas and disposal ponds), which is located on a plateau near the center of the site. Smaller amounts of waste water have been released through disposal facilities at the reactor sites (100 Areas) and at the fuel fabrication area (300 Area). Discharges of waste water to the ground at the FFTF site (400 Area) are minimal.

The discharge of waste water to the ground at the Hanford Site began in the mid-forties and reached a peak in 1955. It declined from this peak after 1955 because of the improved treatment of waste streams and the deactivation of various facilities (Graham 1981) until the end of 1983, when reprocessing facilities were reactivated. Since the reactivation of operations at the PUREX reprocessing facility and related facilities in late 1983, discharge of PUREX-related effluents to the ground has resumed.

## GEOLOGY AND HYDROLOGY OF THE SITE

Geologic and hydrologic properties of the site's subsurface affect the movement of the waste water that has been discharged to the ground.

Therefore, brief descriptions of the geology and hydrology are given below.

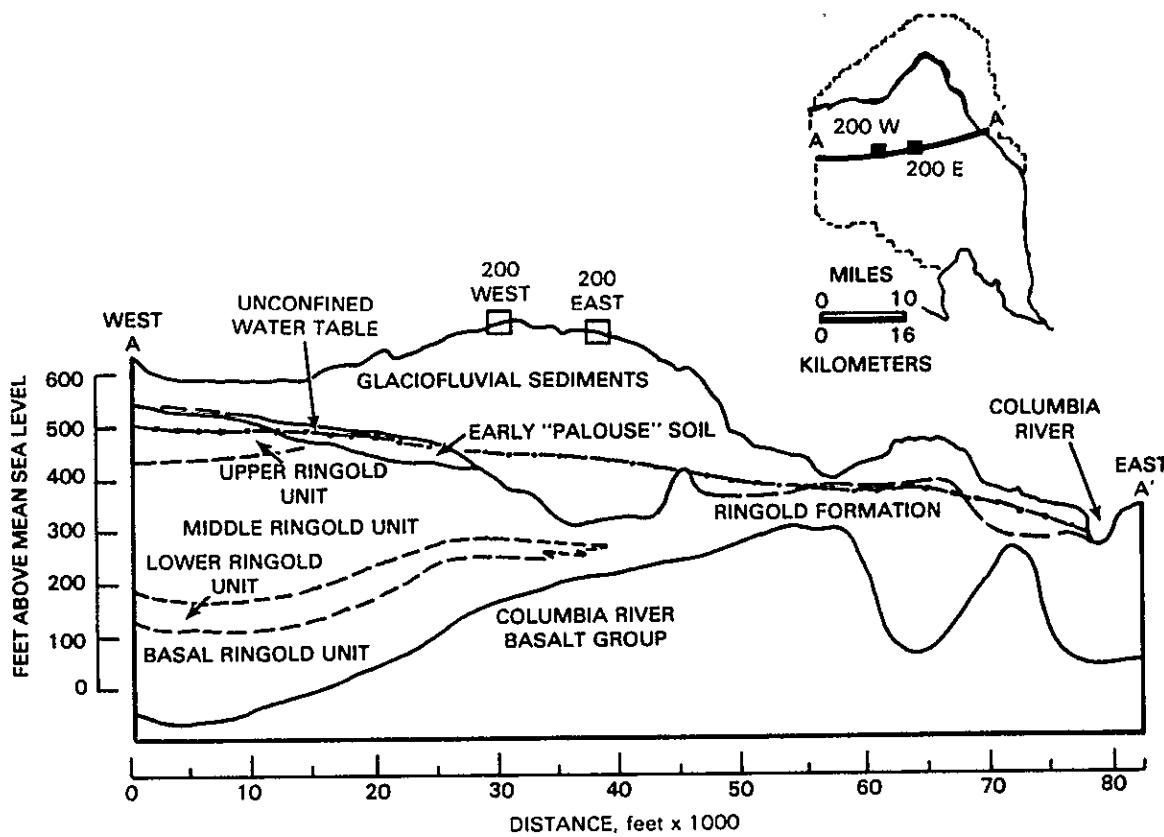
### Geology

The main geologic units beneath the Hanford Site include, in ascending order, the Columbia River basalt group, the Ringold Formation, and a series of glaciofluvial sediments. A generalized geologic cross section of the site is shown in Figure 2.

The Columbia River basalt group is a thick series of lava flows which were extruded from fissures. These basalts have been warped and folded, producing anticlines that, in some places, crop out at the land surface. The Ringold Formation overlies the basalts, except in some localized areas. This formation, consisting of fluvial and lacustrine sediments, is separated into four lithologic units, the basal, lower, middle and upper units. The basal and middle units consist mostly of semiconsolidated gravels and sands, whereas the lower and upper units consist mainly of bedded silts and sands. Beneath the 200-West (200-W) Area, sediments of the upper Ringold Formation have been reworked by the wind and redeposited as a silt layer called the Palouse soil. The glaciofluvial sediments rest atop the Ringold Formation or Palouse soil, and in places where the Ringold has been removed, the basalts. These sediments were deposited by the ancestral Columbia River when it was swollen by glacial meltwater. The glaciofluvial sediments are composed primarily of gravels, sands, and some silts (Newcomb, Strand and Frank 1972).

### Hydrology

Both confined and unconfined aquifers are present beneath the Hanford Site. The confined aquifers, in which the ground water is under pressure greater than that of the atmosphere, are found primarily within the Columbia River basalts. In general, the unconfined or water-table aquifer consists of the Ringold Formation and glaciofluvial sediments, as well as some more recent alluvial sediments in areas adjacent to the Columbia River (Gephart et al. 1979). This relatively shallow aquifer has been most affected,



**FIGURE 2.** Generalized Geologic Cross Section of the Hanford Site

more than the confined aquifer, by waste-water disposal at Hanford; therefore, the ground-water monitoring effort is focused on this aquifer.

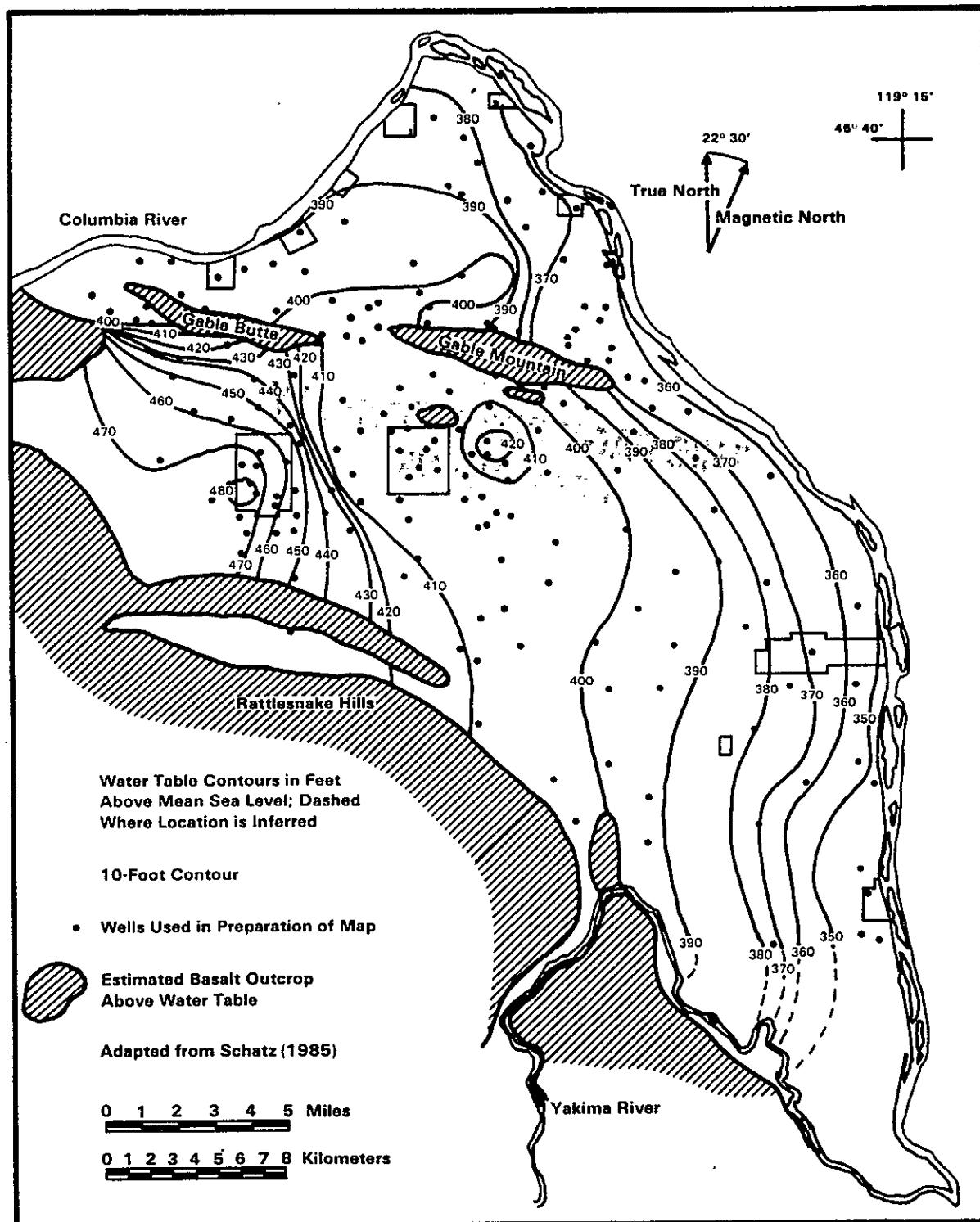
The unconfined aquifer is bounded below by either the basalt surface, or in places, the relatively impervious clays and silts of the lower unit of the Ringold Formation. Laterally, the unconfined aquifer is bounded by the anticlinal basalt ridges which ring the basin, and by the Columbia River, where it eventually discharges. The saturated portion of the unconfined aquifer reaches a thickness of over 61 m (200 ft) in some areas and pinches out along the flanks of the basalt anticlines. With their low permeability, the basalt ridges above the water table act as a barrier to lateral flow of the ground water (Gephart et al. 1979). On the Hanford Site, the depth to the water table ranges from less than 0.3 m (1 ft) near the Columbia River to over 106 m (350 ft) in the center of the site (Figure 2).

Recharge to the unconfined system comes from several sources. Natural recharge from precipitation and runoff occurs principally to the west from the Cold Creek and Dry Creek areas. The Yakima River recharges the unconfined aquifer as it flows along the southwest boundary of the Hanford Site. The Columbia River recharges the unconfined aquifer during its high stages when river water is transferred to bank storage. The unconfined system receives little, if any, recharge from precipitation within the perimeters of the Hanford Site, although present studies, such as those described by Gee and Heller (1985), suggest that precipitation may contribute more recharge to the ground water than was originally thought.

Artificial recharge occurs predominantly from liquid waste disposal operations in or adjacent to the 200-W and 200-E Areas. During 1984,  $3.24 \times 10^{10} \text{ l}$  ( $8.56 \times 10^9 \text{ gal}$ ) of nonradiological and

radioactive liquid waste was discharged to the ground in the Separations Area. The total non-radiological and radioactive liquid wastes discharged to the ground from the beginning of operations, over 40 years ago, to December 31, 1984, was  $7.39 \times 10^{11} \text{ l}$  ( $1.95 \times 10^{11} \text{ gal}$ ) (Aldrich 1985). It has been estimated that recharge to the ground water from the Separations Area (which includes U Pond, B Pond and Gable Mountain Pond, as well as the various cribs and trenches in the 200-W and 200-E Areas) adds ten times the annual volume of water to the unconfined aquifer than is contributed by natural inflow to the area from precipitation and irrigation waters to the west (Graham et al. 1981). The discharge of water has created ground-water mounds near each of the major waste-water disposal facilities in the Separations Area, and the 100 and 300 Areas (Figure 3). These mounds alter the general flow pattern in the aquifer, from the recharge areas in

the west to the discharge areas (primarily the Columbia River) in the east. Ground-water levels have changed continuously over the years because of variations in the volume of waste water discharged. Consequently, the movement of the ground water and its associated constituents has also changed with time. Although ground-water mounding occurs in the 100 and 300 Areas, the volume of liquid discharged to the ground is less. The mounding is also affected by the proximity of these areas to the Columbia River, where river stage may play a part. Therefore, ground-water mounding may not be as significant as in the Separations Area. The effect on the quality of the ground water that enters the Columbia River from the 100 and 300 Areas may be more pronounced because of the short travel times involved, compared to the longer travel times required to move possible contaminants from the separations area.



**FIGURE 3.** Water Table Elevations (December, 1984)

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## METHODS

Over 2,900 wells have been constructed on the Hanford Site from pre-Hanford operations to the present. About 1,100 of these wells were drilled to the ground-water table, and about 900 still contain water. The others have become dry through infiltration of sediments or a general lowering of the water table in their vicinity (McGhan, Mitchell and Argo 1985). The well network provides a means for obtaining ground-water samples and for conducting onsite investigations. Locations of selected sampling wells are shown in Figure 4. The locations of some wells have been revised from previous years' figures, because of new land surveys and clustering of several wells within the same area. These changes have been included in Figure 4.(a)

Most of the wells drilled at Hanford are multi-purpose structures. As the wells are drilled, geologic and hydrologic information is obtained. After drilling is completed, the wells are used to measure ground-water levels and to obtain ground-water samples. Most of the wells are 6 or 8 in. in diameter, have steel casings, and are usually perforated or screened along the upper portion of the saturated zone of the aquifer. This method of well construction has been used because the approximate location of maximum concentration for many contaminants has been found just below the water table at the Hanford Site (Eddy, Myers and Raymond 1978).

### SAMPLE COLLECTION

Ground-water samples are obtained routinely from wells throughout the Hanford Site by the

(a) Wells are designated by Hanford Site coordinates. Three groups of symbols are used to represent one well: Example well 699-26-15 is located in the 600 Area (outside of any of the designated 100, 200, 300 or 400 Areas), as indicated by 699 in the first group of numbers. The second and third groups of numbers consist of the north and west plant coordinates, respectively, rounded off to the nearest 1,000 ft. Well 699-26-15 is located at plant coordinate N25665 and W14554. If a well is located south or east of the Hanford coordinate origin, an S or E is used with the appropriate number. Wells located within 1,000 ft of each other may have letters A, B, C, etc. following the number to identify them. Figure 4 is abbreviated to include only the last two sets of numbers. For further detail refer to *Hanford Wells* (McGhan, Mitchell and Argo 1985).

Environmental Evaluation Section of the Occupational and Environmental Protection Department, according to a master schedule that is formulated each year.(a)

The frequency of sampling is monthly, quarterly, semiannually, or annually, depending on the location of the well and constituents to be analyzed. The volume of each sample is determined by the number of constituents for which that particular sample will be analyzed. The list of wells and their frequency of analysis is included in Appendix D.

During 1984, 339 wells were sampled through the Ground-Water Monitoring Program. A total of 1,510 well-water samples were taken to provide 4,434 analytical results for evaluating the effects of site operations on the ground water. These figures do not include the monitoring efforts of other DOE contractors on the Hanford Site.(b) A summary of the number of analyses performed by PNL is presented in Table 1.

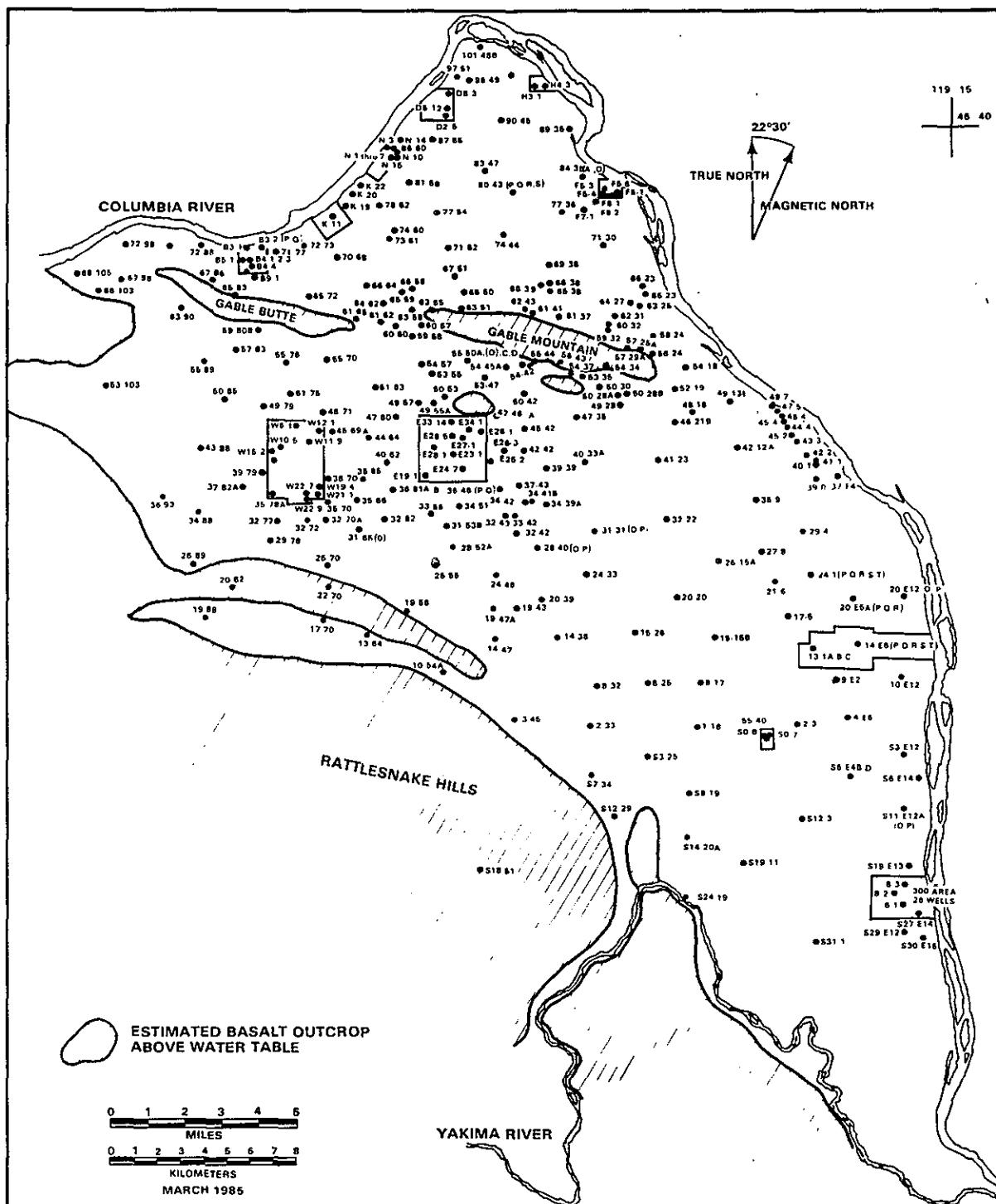
**TABLE 1.** Numbers of Wells Sampled, Samples Taken, and Analyses Performed through the Ground-Water Monitoring Program, 1984

Area	Number of Wells Sampled	Number of Samples Taken	Number of Analyses Made
100	59	287	797
200	22	96	264
300	28	112	704
400	6	24	116
600(a)	224	991	2553
Totals	339	1510	4434

(a) The 600 Area encompasses all of the Hanford Site not included in the other operating areas (100, 200, 300, and 400 Areas).

(a) As of April 1985, the Environmental Evaluations Section is part of the Earth Sciences Department at PNL.

(b) Both Rockwell Hanford Operations (RHO) and UNC Nuclear Industries (UNC) monitor effluents within their areas of jurisdiction. The Separations Area is monitored by both PNL and RHO. The 100-N Area is monitored by UNC and PNL.



**FIGURE 4.** Locations of Selected Sampling Wells

The majority of the monitoring wells contain dedicated submersible pumps to avoid possible cross-contamination of the ground-water sample. Bailers are used to sample the wells that will not produce enough water to sample by pumping. When a bailer must be used, the sample is collected by lowering a plastic bottle enclosed in a steel bailer. The bailed samples are collected just below the surface of the water table.

When possible, the wells are purged before sampling to provide a representative sample of the aquifer water. The maximum pumping time required to provide a representative sample has been determined for some of the wells on the Hanford Site (Scharnhorst 1982).

Most of the samples are collected from the unconfined aquifer. However, at a few locations where appropriate wells are available, samples are obtained from wells completed in the confined aquifers (see Table 2). In CY 1984, the analy-

ses conducted on these samples showed much lower concentrations of the various constituents than did those samples obtained from nearby wells open to the unconfined aquifer.

## SAMPLE ANALYSIS

The samples collected during routine sampling are analyzed for a number of radioactive and nonradioactive constituents. Both tritium ( $^3\text{H}$ ) and nitrate ion ( $\text{NO}_3^-$ ) are monitored most actively, because these constituents are readily transported in ground water and their concentrations are decreased very little by adsorption or ion exchange. Samples from selected wells are also analyzed, at less frequent intervals, for radionuclides such as: uranium (natural, i.e.,  $^{238}\text{U}$ ,  $^{234}\text{U}$ , and  $^{235}\text{U}$  assumed to be in equilibrium),  $^{90}\text{Sr}$ ,  $^{60}\text{Co}$ ,  $^{106}\text{Ru}$ ,  $^{131}\text{I}$ ,  $^{137}\text{Cs}$ ,  $^{22}\text{Na}$ , and  $^{65}\text{Zn}$ . Gross beta activity is determined in well water from the 300 Area, and certain wells in the 400 Area and 100-H Area. Some samples from the 200 Areas are monitored for gross alpha activity. The nonradioactive constituents that are monitored in various wells include: calcium, magnesium, sodium, carbonates, bicarbonates, potassium, boron, nitrogen ( $\text{NO}_3^-$  reported as N), chloride, sulfate as sulfur, the hexavalent form of chromium, fluoride, and other parameters such as pH, conductance, and dissolved solids. Appendix D lists the wells sampled during CY 1984 and the analyses that were conducted on those samples.

A small number of samples are analyzed for  $^{129}\text{I}$ . However, because of the expense and time required to analyze these samples the number of samples collected has been limited. During CY 1984, direct measurements by a newly developed Mass Spectrometric (MS) procedure was attempted and the results compared to the Neutron Activation Analysis (NAA) method, which is presently used to detect  $^{129}\text{I}$ . The two methodologies using, from 200-E Area wells, those  $^{129}\text{I}$  samples that were collected and analyzed for Rockwell Hanford Operations (RHO) are compared in Table 3. This table includes results of  $^{129}\text{I}$  samples collected in 1982 and 1983. Additional work is needed to resolve some of the differences; however, the MS method shows promise for more rapid and economical  $^{129}\text{I}$  analyses of well waters.

TABLE 2. Wells Sampling the Confined Aquifer

Well	Comments
199-B3-2P	
199-B3-2Q	
699-S6-E14	Composite Unconf./Conf.
699-S11-E12A (0)	Composite Unconf./Conf.
699-S11-E12A P	
699-S12-29	
699-S18-51	
699-S24-19	
699-17-47	Composite Unconf./Conf.
699-20-E5P	
699-20-E5Q	
699-20-E5R	
699-20-E12P	
699-24-1P	
699-24-1Q	
699-24-1R	
699-24-1S	
699-26-89	Composite Unconf./Conf.
699-28-40P	
699-31-31P	
699-36-46P	
699-36-46Q	
699-53-103	
699-80-43P	
699-80-43Q	
699-80-43R	

**TABLE 3.** Comparison of Iodine-129 Concentrations in Samples Analyzed by Neutron Activation and Mass Spectrometric Methods<sup>(a)</sup>

Sample Location	Date Sampled	NAA <sup>(b)</sup> pCi/l	% error	MS <sup>(c)</sup> pCi/l	% error
699-35-9	07-27-82	0.10	5		
699-25-55	07-14-82	$2.0 \times 10^{-5}$	7		
699-41-23	07-15-82	2.9	4		
699-27-8	07-27-82	1.6	4		
699-87-55	07-22-82	$1.2 \times 10^{-4}$	5		
699-87-55	07-22-82	$1.9 \times 10^{-4}$	5		
699-87-55	07-22-82	$3.6 \times 10^{-5}$	6		
699-32-22	07-15-82	2.9	5		
699-50-8	04-27-83	$1.4 \times 10^{-2}$	4.0		
499-51-8A	04-27-83	$4.9 \times 10^{-2}$	3.7		
699-50-28B	04-27-83	$2.3 \times 10^{-3}$	4		
699-9-E2	04-27-83	$2.0 \times 10^{-5}$	4.1		
699-47-35A	04-26-83	$1.3 \times 10^{-3}$	38.0		
699-26-15	04-26-83	2.9	4.0		
699-15-15	04-26-83	$1.2 \times 10^{-3}$	22.7		
699-17-5	04-27-83	$3.7 \times 10^{-5}$	4.1		
699-20-39	04-27-83	$9.5 \times 10^{-5}$	3.9		
299E-17-9 <sup>(d)</sup>	11-15-83	10.78	4.4		
299E-25-20 <sup>(d)</sup>	12-09-83	1.76	4.3		
299E-17-9 <sup>(d)</sup>	11-15-83	8.2	4.8	3.4 8.1 (e) 1.70(e)	4.5 6.8(e) 10.2(e)
299E-25-20 <sup>(d)</sup>	12-09-83	1.34	4.6	1.25 8.4	
R299E-17-1 <sup>(d)</sup>	09-05-84	22.4	5.0	16.2	4.6
R299E-17-9 <sup>(d)</sup>	09-05-84	22.0	5.0	12.4	7.2
R299E-25-20 <sup>(d)</sup>	09-05-84	3.40	5.0	3.14	4.9
R299E-17-9 <sup>(d)</sup>	10-02-84	16.9	4.8	20.7	4.9
R299E-17-1 <sup>(d)</sup>	10-02-84	17.3	4.9	19.2	4.7
R299E-25-20 <sup>(d)</sup>	10-01-84	2.61	4.7	3.54	6.1

(a) DOE Concentration Guide (CG) is 60 pCi/l.

(b) NAA - Neutron Activation Analysis Methodology.

(c) MS - Mass Spectrometry Analytical Method.

(d) Iodine-129 samples from wells located in the 200-E Area, were collected and analyzed for RHO; these wells can be located in Hanford Wells (McGhan, Mitchell and Argo 1985).

(e) Duplicate analyses.

Organic chemicals are not presently included in the routine sampling program. However, some samples have been collected and analyzed by the Hanford Environmental Health Foundation (HEHF) to detect possible contamination in drinking water. As a part of monitoring in CY 1984, special samples were collected in a survey to determine the location and identity of organic

constituents in the ground water. The results of the study are reported in the special and supporting studies chapter of this document.

Most of the analyses introduced in the preceding paragraphs were performed by PNL's Radiological and Inorganic Chemistry Section. Iodine-129 samples were analyzed by PNL's Analytical and Nuclear Research Section. The water quality of some wells was evaluated by HEHF as part of their program to monitor drinking water. The U.S. Geological Survey (USGS) provided quality assurance by sampling and analyzing ground water obtained from 20 wells located on the Hanford Site (the resulting data is shown in Appendix C). Standard radiometric and chemical methods are used to analyze the ground-water samples (Standard Methods, 1976, 1981).

During 1984, the Radiological and Inorganic Chemistry Section revised their analytical procedure for determining nitrate concentrations in ground water. A new method was selected because the previous method of analysis (Phenoldisulfonic Acid Colorimetric Procedure) has a low working range of 0.1 to 2.3 mg/l NO<sub>3</sub>-N or 0.44 to 10 mg/l NO<sub>3</sub> and is very sensitive to negative interferences from chlorides (Serne, Mason and Harvey 1975). The new method, called the NO<sub>3</sub> Specific Ion Electrode Procedure, measures activity rather than concentration and incorporates a buffer solution to limit the influence of other anions such as bicarbonate, organic acid anions, chloride, and carbonates. The acceptable concentration range of this method is between 1 and 1,000 mg/l nitrate-nitrogen (NO<sub>3</sub>-N) or 4.4 to 4,400 mg/l nitrate as nitrate ion.

During the first six months of CY 1984, ground-water samples were analyzed using both procedures. A comparison of these analyses is presented in Table 4. For almost all ground-water samples analyzed for NO<sub>3</sub> the use of the NO<sub>3</sub> Specific Ion Procedure has resulted in higher nitrate concentrations than those analyzed using the previous method. Increases in nitrate concentrations shown on maps generated in this report reflect this change in analytical procedures.

**TABLE 4.** Comparison of Selected Nitrate Concentrations in Samples Analyzed by the Phenoldisulfonic Acid and the Nitrate-Ion Specific Electrode Procedures

Well Number	Sampling Coordinate	Date	Phenoldisulfonic Acid Method	Specific Electrode Method	% Difference <sup>(a)</sup>	Well Number	Sampling Coordinate	Date	Phenoldisulfonic Acid Method	Specific Electrode Method	% Difference <sup>(a)</sup>
			(mg/l)	(mg/l)					(mg/l)	(mg/l)	
699-2-3		01-20-84	27	40.6	50	699-42-2		01-24-84	23	64	178
		02-28-84	24	50	108			02-17-84	29	44	52
		05-10-84	26	33	27			05-07-84	30	40	33
		06-15-84	29	36	24			05-31-84	34	50	47
699-21-6		01-20-84	34	54	59			06-19-84	30	42	40
		02-17-84	36	48	33			02-17-84	30	46	53
		06-15-84	30	47	57			05-07-84	29	35	21
699-29-4		01-06-84	22	33.8	54	699-44-4		05-31-84	29	47	62
		01-20-84	21	38.6	84			06-19-84	31	41	32
		02-17-84	24	35	46			02-17-84	15	29	93
		05-07-84	24	32	33			05-07-84	0.48	0.88	83
		06-15-84	26	32	23			05-31-84	1.4	3.7	164
699-37-E4		01-25-84	0.23	1.72	648	699-46-4		06-19-84	1.1	2.9	164
		02-17-84	0.05	1.3	2,500			02-17-84	26	38	46
		05-07-84	22	28	27			05-07-84	25	34	36
		05-31-84	20	35	75			05-31-84	12	34	146
		06-19-84	18	27	50			02-17-84	15	28	87
699-39-0		01-25-84	29	58	100	699-47-5		05-07-84	13	19	46
		02-17-84	35	50	43			06-19-84	27	38	41
		05-07-84	36	41	14			05-31-84	25	45	80
		05-31-84	33	54	64			02-17-84	15	28	87
		06-19-84	33	47	42			05-07-84	13	19	46
699-41-1		01-24-84	25	55.4	122	699-49-79		05-31-84	14	28	100
		02-17-84	34	47	38			06-21-84	14	17	21
		05-07-84	38	42	11			01-17-84	36	55	53
		05-31-84	37	55	49			01-16-84	27	35.6	32
		06-19-84	34	43	27			199-H4-3	1,200	1,040	13
								05-23-84	880	960	9

(a) Calculated as the absolute difference between the concentrations for each sample divided by the Phenoldisulfonic Acid Method result, multiplied by 100.

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## QUALITY CONTROL

The quality control effort of the Ground-Water Monitoring Program at PNL was initiated in 1974 and includes all phases of the program. Much effort is expended to ensure that samples are representative of the intervals sampled beneath the Hanford Site. This includes: 1) extensive data collection to eliminate an unrealistic reliance on only a few results, 2) documentation of instrument calibrations and procedures in the field and in the laboratory, 3) scheduled maintenance of wells to ensure their integrity as sampling structures, 4) inspection of wells using a down-hole TV camera and geophysical logging devices, 5) use of dedicated sampling pumps to avoid cross-contamination, and 6) performance of laboratory audits by submitting duplicate samples for analysis and then comparing the results.

As one method of maintaining quality control, PNL annually submits duplicate samples for analysis by the analytical laboratory. The duplicate samples consist of one record sample and one blind sample. The record sample is labeled with the actual well number and the blind sample is labeled with a fictitious well number.

Analytical results for the duplicate samples analyzed for tritium and nitrate in 1984 are given in Tables 5 and 6. The first two columns in these tables show the analytical results of both the record sample and the duplicate sample. The third and fourth columns contain the differences, expressed in terms of the analytical units and as a percentage. The samples with relatively high tritium concentrations agreed within less than 5%. No comparison was made between samples in which one or both of the measured concentrations was less than zero or less than the detection limit for tritium, approximately 300 pCi/l. The remaining samples with values close to the detection limit show differences that are within acceptable limits. The nitrate samples, with a few exceptions, have acceptable agreement, generally 20% or less difference between samples.

As part of the quality control effort of the Ground-Water Monitoring Program, the USGS collects and analyzes ground-water samples from approximately 20 Hanford Site wells each year.

TABLE 5. Results of Duplicate Samples Analyzed for Tritium, 1984

Well Number	Record Sample, pCi/l	Blind Sample, pCi/l	Difference pCi/l(a)	% Difference(b)
1	-150 ± 440(c)	-42 ± 440	—	—
2	38,000	38,000	0	—
3	-280 ± 440(c)	130 ± 440	—	—
4	87,000	84,000	3,000	3
5	670 ± 440	840 ± 440	170	25
6	290 ± 440	760 ± 440	470	—
7	810 ± 450	550 ± 450	260	32
8	8,200	8,600	400	5
9	450 ± 500	240 ± 500	210	—
10	530 ± 500	160 ± 490	370	—
11	550 ± 490	410 ± 490	140	—
12	8,300	8,600	300	4
13	520 ± 550	230 ± 550	290	—

(a) Calculated as the absolute difference between the measured concentrations of the record and blind samples. Error bands were ignored.

(b) Calculated as the absolute difference divided by the result of the record sample, multiplied by 100.

(c) Negative values indicate that background count from a blank is larger than the analyzed result. Although no negative concentration can exist, if statistical averaging is to be done on any sample, the actual counting results should be reported.

TABLE 6. Results of Duplicate Samples Analyzed for Nitrate, 1984

Well Number	Record Sample, mg/l	Blind Sample, mg/l	Difference mg/l <sup>(a)</sup>	% Difference <sup>(b)</sup>
1	0.73	0.80	0.07	10
2	22	26	4	18
3	16	16	0	—
4	11	9.3	1.7	15
5	80	250	170	213
6	960	1,100	140	15
7	9.4	7.5	1.9	20
8	170	180	10	6
9	2.6	1.1	1.5	58
10	610	660	50	8
11	57	61	4	7
12	120	110	10	8
13	170	200	30	18
14	3.7	2.1	1.6	43
15	4.7	4.8	0.1	2

(a) Calculated as the absolute difference between the measured concentrations of the record and blind samples.

(b) Calculated as the absolute difference divided by the result of the record sample, multiplied by 100.

By comparing the USGS data with PNL data from the same wells, the general agreement of the two data sets can be assessed. A comparison of the USGS data for each well sampled in 1984 with the yearly average obtained by PNL for the same well is shown in Table 7. The variability that exists between the two data sets may be the result of differences in sample collection, laboratory analytical procedures, quality control, or it may be due to actual differences in the concentrations in the ground water when the samples were collected. Future analysis of split samples should provide more information on the source(s) of the variability. In addition to providing quality control, the USGS provides more complete chemical characterization of Hanford ground water. The 1984 data include chemical and spectrographic analyses (see Appendix C).

Another quality control effort initiated by PNL uses a computer program called SCREEN. SCREEN detects whether a new analytical data point for a well conforms to the trend set by that well's

recent history. Using the trend, the program computes the next predicted value and sets an upper and lower limit of 2.09 standard deviations. Exactly 95% of the observed values are expected to fall within these limits. When a new data point is received, SCREEN determines whether it is above, below or within the limits for that date. It also predicts the time when the concentration in that well is expected to exceed a DOE Concentration Guide or EPA Drinking Water Standard, or fall below a sensor detection limit. SCREEN is routinely run when PNL sampling data are received, but this year the program was also run using the 1984 USGS data for tritium. The purpose of this special run was to determine if the USGS data points fell within the limits computed by SCREEN. Eighteen of the tritium concentrations fell within the bounds set by the upper and lower limits. Tritium concentrations for well 699-57-29A and 699-62-31 could not be checked because there was insufficient past data to define a clear trend.

**TABLE 7. Comparison of USGS and PNL Samples Analyzed for Tritium, 1984**

Well Number	Tritium, pCi/l		Difference pCi/l <sup>(a)</sup>	% Difference <sup>(b)</sup>
	USGS	PNL		
699-26-15A	433,000	460,000	-27,000	6
699-35-9	164,000	160,000	+4,000	3
699-39-39	<200	640(c)	—(d)	—
699-40-1	234,000	240,000	-6,000	3
699-42-12A	322,000	330,000	-8,000	2
699-45-42	62,400	63,000	-600	1
699-47-46A	<200	210	—(d)	—
699-50-42	1,870	2,200	330	15
699-50-53	<200	210	—(d)	—
699-54-34	<200	10	—(d)	—
699-55-50C	<200	140	—(d)	—
699-57-25A	<200	69	—(d)	—
699-57-29A	670	650	+20	3
699-59-58	1,340	1,100	+240	22
699-60-32	1,090	1,000	+90	9
699-62-31	<200	450(c)	—(d)	—
699-63-55	810	990	-180	18
699-63-58	600	580	+20	3
699-65-50	880	1,300	-420	32

(a) Calculated as the result of the USGS sample minus the result of the PNL sample.

(b) Calculated as the absolute difference divided by the PNL average concentration, multiplied by 100.

(c) Only one value was obtained for this well during 1984.

(d) The difference was not calculated because of the nonquantitative result obtained by the USGS.

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## DISTRIBUTION AND CONCENTRATIONS OF RADIONUCLIDES AND CHEMICALS IN THE GROUND WATER

Liquid effluents discharged to the ground at the Hanford Site waste disposal facilities have percolated downward through as much as 100 m (328 ft) of unconsolidated sediments that overlie the saturated portion of the unconfined aquifer. As the wastes have moved through these sedimentary materials, adsorption and ion exchange have taken place between the minerals in the sediments and the chemical species in the waste water. Some of the radionuclides in the waste water, such as <sup>90</sup>Sr, <sup>137</sup>Cs and <sup>239</sup>Pu, have good ion-exchange characteristics and have been held in the soil column as the waste water has percolated downward. Other radionuclides, such as <sup>3</sup>H, <sup>129</sup>I and <sup>99</sup>Tc, have poor ion-exchange characteristics. These radionuclides have moved through the soil column at varying rates, eventually entering the ground water. Subsequently, they have moved in a general downgradient direction at a rate nearly equal to the velocity of the ground water. As the radionuclides have moved with the ground water, their concentrations have been further reduced by radioactive decay, dilution, molecular diffusion, and mechanical dispersion.(a)

The Ground-Water Monitoring Program at the Hanford Site monitors both the movement and concentrations of many of the radionuclides and some possible chemical contaminants found on the site. This chapter includes sections describing the distribution and concentrations of tritium, nitrate, and other radionuclides in the unconfined aquifer. Tritium and nitrate have been selected for detailed discussion in this report because of their mobility in both the unsaturated and saturated sediments underlying the Hanford Site. The tritium and nitrate sections of this chapter each contain a map showing the distribution of the radionuclide or chemical

(a) Both molecular diffusion and mechanical dispersion are defined here as forms of hydrodynamic dispersion, whereby solutes are spread or mixed as they are transported by the ground water as it moves through heterogeneous sediments. Diffusion is a more important process at lower ground-water velocities (Freeze and Cherry 1979).

constituent sampled in the upper 6.1 m (20 ft) of the unconfined aquifer at the Hanford Site.

### EVALUATION OF GROUND-WATER MONITORING DATA

Radionuclide concentrations in the ground water beneath the Hanford Site are evaluated in terms of their respective DOE Concentration Guides (CGs) (U.S. Department of Energy 1981). Radionuclide and chemical concentrations are also compared with Drinking Water Standards (DWS) promulgated by the U.S. Environmental Protection Agency in 40 CFR 141 (revised 1984) and adopted by the State of Washington (Washington State DSHS 1978). The DWS are based on the approximate radionuclide concentration that would result in a yearly dose of 4 mrem if a person were to consume two l/d of water. Handbook 69 (National Bureau of Standards 1959) is incorporated to calculate concentrations of those radionuclides which are not listed in 40 CFR 141. These calculations and underlying assumptions are shown in Appendix IV of National Interim Primary Drinking Water Regulations (U.S. Environmental Protection Agency 1976).

The concentration guides used in the Ground-Water Monitoring Program have been established by DOE and apply to uncontrolled areas, that is, to those areas outside the Hanford Site boundaries. The DWS do not apply within the Hanford Site boundaries but are listed for comparative purposes. Both the CGs and the DWS provide a conservative method of comparing and evaluating the potential significance of the constituents found in the ground water. Table 8 shows the minimum detectable concentrations (MDC) and applicable CGs and DWS for primary radionuclides and various chemicals analyzed through the Ground-Water Monitoring Program.

### TRITIUM CONCENTRATIONS IN THE UNCONFINED AQUIFER

Tritium occurs naturally as precipitation or in surface waters at concentrations of approximately 10 tritium units (T.U.) in the northern midlatitudes and may be zero in the deep ocean and deeper ground waters (Fairbridge 1972). A T.U. is

**TABLE 8. Minimum Detectable Concentrations, Drinking Water Standards, and Concentration Guides for Various Radionuclides and Inorganic Constituents**

Constituent	MDC <sup>(a)</sup> , pCi/l	DWS <sup>(b)</sup> , pCi/l	CGs <sup>(c)</sup> , pCi/l (10 <sup>-9</sup> µCi/l)
<b>Radionuclides</b>			
Gross Beta	0.5	50(d)	3,000
Gross Alpha	1.0	15(d)	30
<sup>3</sup> H	300	20,000(d)	3 x 10 <sup>6</sup>
<sup>14</sup> C	—	2,000(e)	800,000
<sup>60</sup> Co	20	100(e)	50,000
<sup>90</sup> Sr	0.6	8(d)	300
<sup>99</sup> Tc	3 x 10 <sup>-3</sup>	900(e)	300,000
<sup>106</sup> Ru	0.5	30(e)	10,000
<sup>125</sup> Sb	60	300(e)	100,000
<sup>129</sup> I	1 x 10 <sup>-6</sup>	7(e)	60
<sup>131</sup> I	1.0	3(e)	300
<sup>137</sup> Cs	1.0	200(e)	20,000
U (Natural)	0.5	15(d)	600
<b>Chemicals</b>			
NO <sub>3</sub> (as NO <sub>3</sub> <sup>-</sup> ion)	0.5 (mg/l)	45 (mg/l)	NA(f)
F <sup>-</sup>	0.08 (mg/l)	1.8 (mg/l)	NA(f)
Cr <sup>6+</sup>	0.01 (mg/l)	0.05 (mg/l)	NA(f)

(a) MDC - Minimum Detectable Concentration.

(b) DWS - Drinking Water Standard (a dose equivalent based on a dose of 4 mrem/yr if water intake is two l/d for 365 d/yr).

(c) CGs - Concentration Guides (USDOE 1981).

(d) From 40 CFR 141 (USEPA, revised 1984).

(e) From EPA-570/9-76-003 (USEPA 1976).

(f) NA = not applicable.

one atom of tritium in 10<sup>18</sup> atoms of all hydrogen isotopes. This is equivalent to 3.218 pCi/l, if the physical half-life of tritium is considered as 12.35 years (Moghissi and Carter 1973).

Man-made tritium has been found to be a product of uranium fission and may originate from various sources including: electrical power generating reactors, reactors producing nuclear materials for defense purposes, atmospheric tests of nuclear weapons, heavy water plants, tritium production reactors, tritium separations

plants, and tritium handling operations (Moghissi and Carter 1973). On the Hanford Site, the main sources of tritium are the PUREX plant operations in the 200-E Area (USDOE 1983) and the 100-N facilities, which released 140 Ci of <sup>3</sup>H to the Columbia River in 1984 (Price et al. 1985). The average tritium concentration measured in the Columbia River upriver from the Hanford Site in 1984 was 130 ± 15 pCi/l (Price et al. 1985). This includes tritium derived from atmospheric bomb testing as well as natural tritium. Concentrations measured downriver of the Hanford Site boundaries averaged 170 ± 23 pCi/l (Price et al. 1985).

Because tritium enters the ground-water system as part of the water molecule, it moves with the ground-water flow and is little affected by the geologic conditions that affect other radionuclides. Tritium, therefore, provides a good indication of the movement of ground water at the Hanford Site. Figure 5 shows the distribution of tritium in the unconfined aquifer for 1984. Appendix B.2 contains the concentrations of tritium found in samples collected in 1984. Appendix A includes the average concentrations for CY 1984 used to draw the contours on this tritium plume map.

The map of average 1984 tritium concentrations shows four concentration zones. The four zones are: <1,000, 1,000 to 30,000, 30,000 to 300,000, and >300,000 pCi/l. Isopleths, in pCi/l, were used to allow a direct comparison of plume movement in 1984 with the contour intervals, in pCi/ml units, used in *Ground-Water Surveillance at the Hanford Site for CY 1983* report (Prater et al. 1984) (Figure 5A). The largest tritium plume, resulting from previous discharges by PUREX and related facilities and located between the 200 Areas and the Columbia River, has changed only slightly in the past year along its edges. Well 699-37-E4 (previously labelled 699-39-E3, before being surveyed; see Figure 5), located near the Hanford Townsite (Figure 1), has lower tritium concentrations than those found in wells immediately to the north. The concentration of tritium in 699-37-E4 averaged 16,600 pCi/l (16.6 pCi/ml) during CY 1984, an increase from the 10,500 pCi/l (10.5 pCi/ml) average reported in the CY 1983 ground-water surveillance report (Prater et al. 1984).

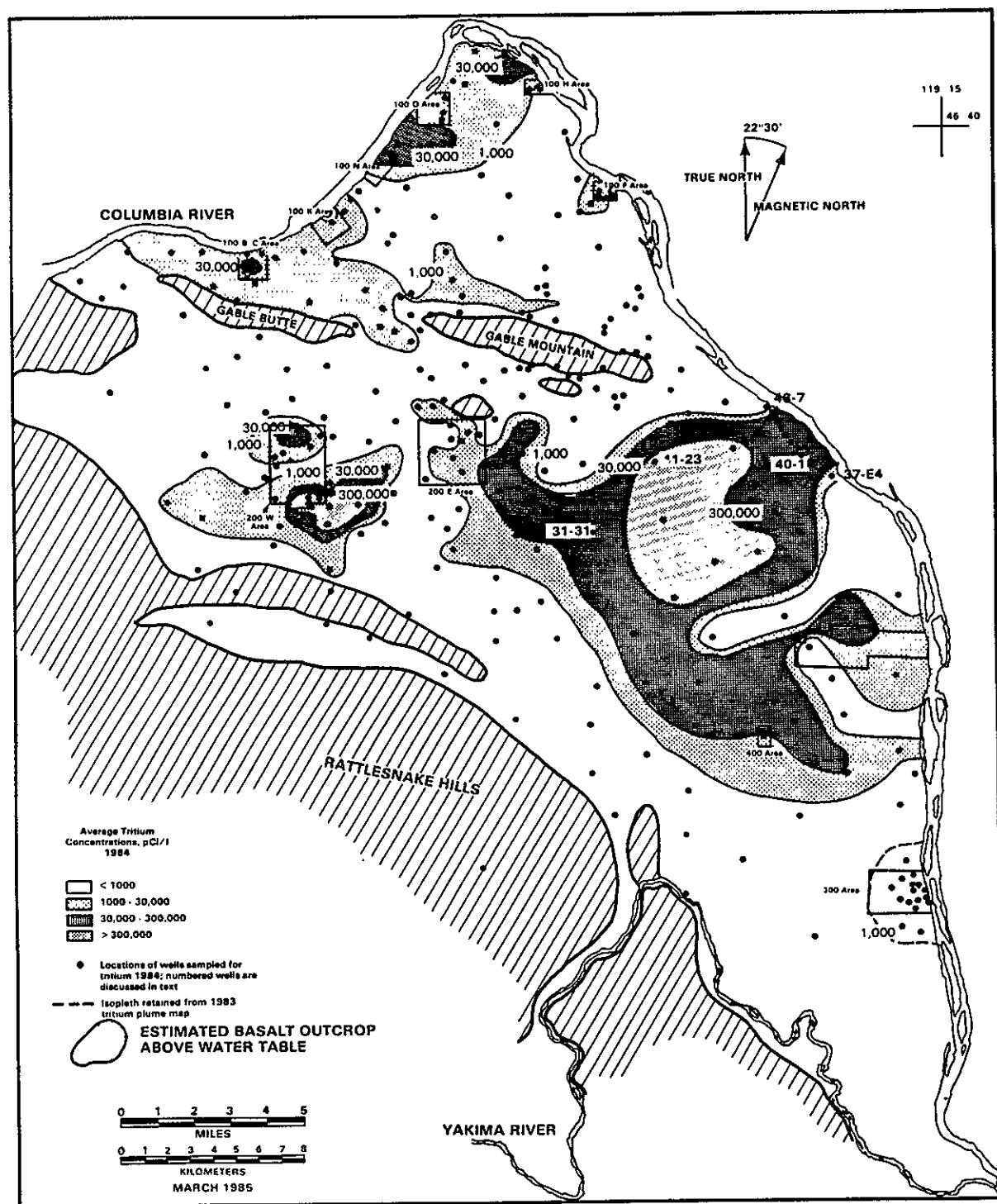
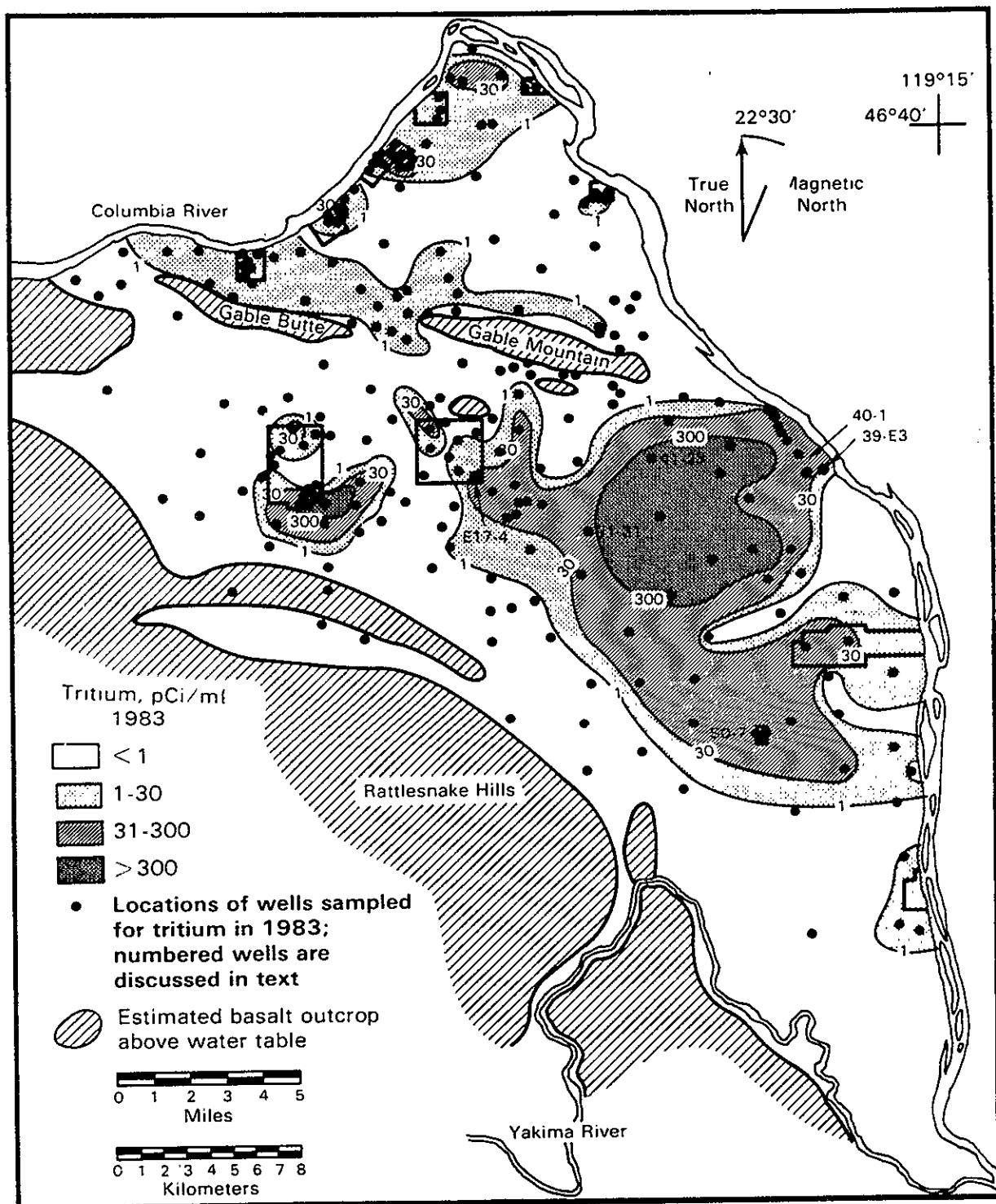


FIGURE 5. Average Tritium Distribution in the Unconfined Aquifer, 1984



**FIGURE 5A.** Average Tritium Distribution in the Unconfined Aquifer, 1983

Tritium data from this well, as recorded for the last two years, is shown in Figure 6. The area to the south of well 699-37-E4 (where sand dunes prevent installation of wells) probably has very low concentrations of tritium, based on the low concentrations found in this well and special spring samples collected along this reach of the river in 1983 (McCormack and Carlile 1984). This area is considered to be outside the present perimeter of the tritium plume, as shown in Figure 5. Figure 7 shows a cross section of the tritium plume at the Hanford Townsite in CY 1982 and CY 1984, illustrating the narrowness of the plume as it enters the Columbia River and the increase in tritium concentrations since 1982. The transect begins at well 699-37-E4 and ends at well 699-48-7 (see Figure 5).

A decline in concentrations of tritium in wells on the western (upgradient) edge of the tritium plume and the increase, from previous years, in tritium concentrations in wells on its eastern (downgradient) edge suggest that the zone of greatest tritium concentration ( $>300,000 \text{ pCi/l}$ ) within the largest plume is moving toward the Columbia River. Concentrations in well 699-31-31, which is located on the western edge of the plume, have decreased sharply, from over  $1 \times 10^6 \text{ pCi/l}$  to less than  $200,000 \text{ pCi/l}$  (Figure 8). The concentrations in well 699-41-23 (Figure 9), which is further to the east, have continued to decline, but not as rapidly as in well 699-31-31. Concentrations in well 699-40-1, located adjacent to the Columbia River, have increased since 1972 and are now apparently stabilizing at the present level (Figure 10).

The plume immediately north of Gable Mountain and Gable Butte was probably the result of waste-water management operations in the 200 Areas and, because of dispersion and radioactive decay, the larger concentrations are no longer observed. The smaller plumes adjacent to the 100 Areas have originated from operations or disposal practices pertinent to those particular areas, or are remnants of the plume from the 200 Areas.

The 1984 map shows some changes from the 1983 version in the proximity of the 200 Areas and, to some extent, adjacent to the 100 Areas. The tritium plume near 200-W Area has expanded since 1983, and more of the lower (1,000 to 30,000

$\text{pCi/l}$ ) concentrations appear to the west of the area as well as to the east. Tritium concentrations near the northwest corner of the 200-E Area have declined since 1983 and are represented now by the 1,000 to 30,000  $\text{pCi/l}$  increment of the plume. A difference from last year is the appearance of a 30,000 to 300,000  $\text{pCi/l}$  concentration zone in the 100-B-C Area. This is based on the concentrations found in well 199-B4-1 and well 199-B4-3 during the month of December. Both analytical results were well above the normal concentrations found in these wells and are, as yet, unexplained. The discontinuous plume contour surrounding the 300 Area is inferred from the previous year's map, shown in Figure 5A (Prater et al. 1984), based on single samples collected from three wells during CY 1983. These wells were not sampled during 1984, but have been included in the sampling schedule for CY 1985.

Appendix A lists the maximum, minimum, and average tritium values. Appendix B lists the actual tritium concentrations as reported by the PNL analytical laboratory.

#### NITRATE CONCENTRATION IN THE UNCONFINED AQUIFER

Nitrate in the unconfined aquifer at the Hanford Site originates from many different sources. Sodium nitrate produced during fuel reprocessing operations was disposed to the ground through cribs, near the 200-E and 200-W Areas. Nitrate in the ground water at the 100-H Area probably came from a previously reported leak in 1978 in an unlined concrete basin at the 183-H solar evaporation facility. This basin has since been decommissioned, but other 183-H basins still receive wastes generated by fuel fabrication activities. Nitrate near the 100-F Area has been attributed to leaching of wastes from research animals. The origin of nitrate in the other areas of the Hanford Site and near the Rattlesnake Hills may be associated with past or present agricultural activities (Prater et al. 1984). The high nitrate concentration (58 mg/l during CY 1984) immediately south of Gable Mountain, in well 699-54-45A (see location map—Figure 4), may be related to disposal of wastes to the Gable Mountain Pond.

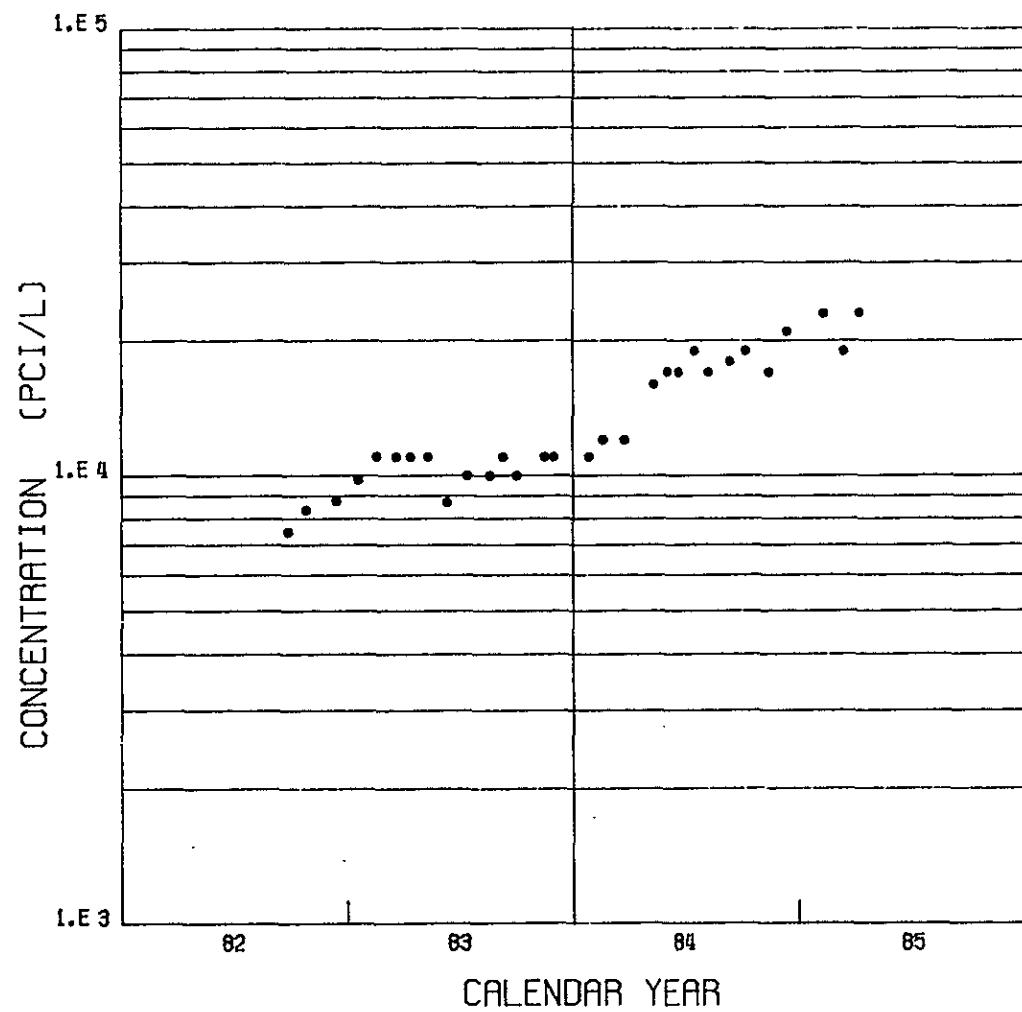
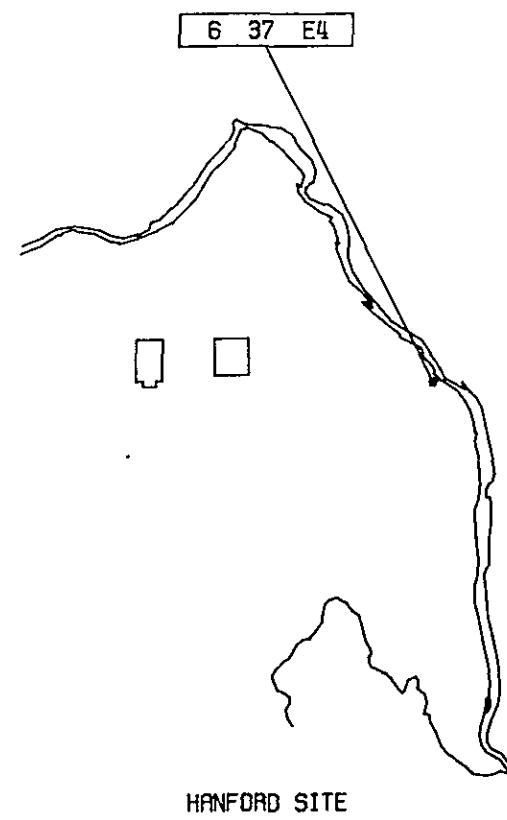
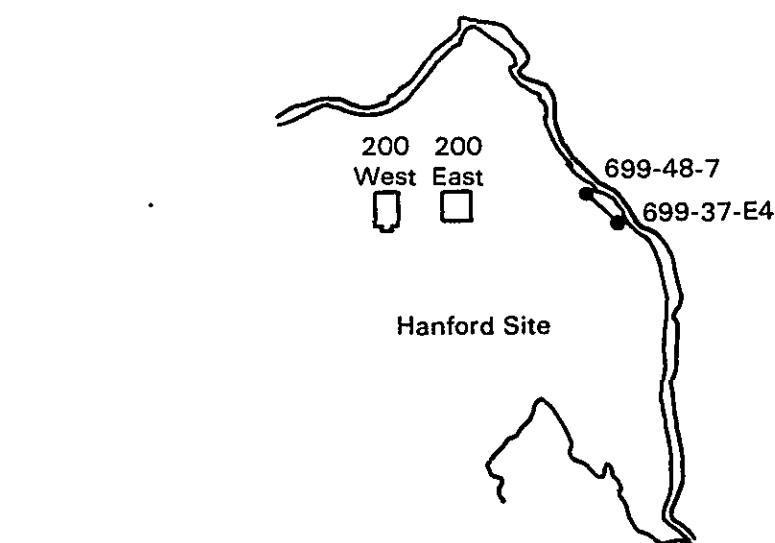
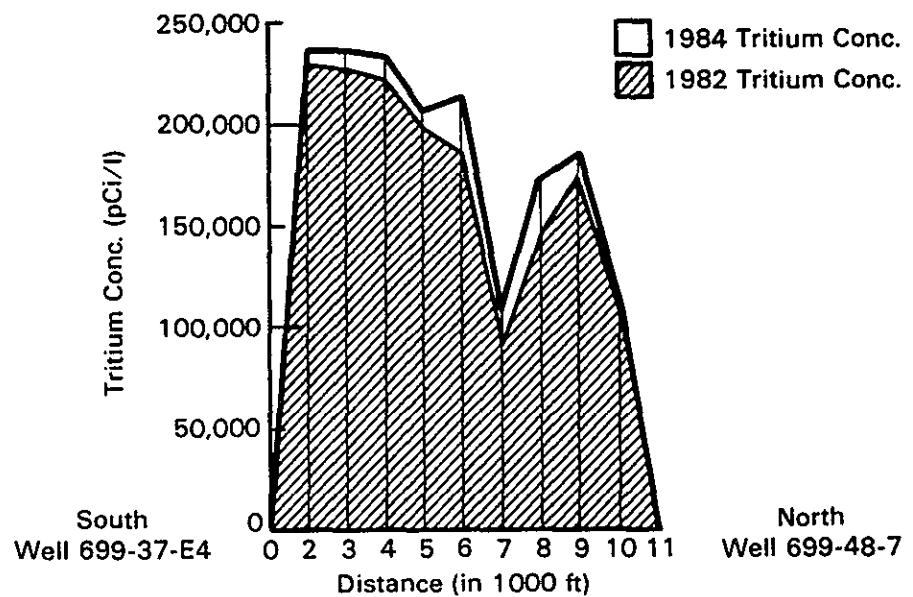


FIGURE 6. Tritium Concentrations in Well 699-37-E4, 1982-1985





**FIGURE 7.** Cross Section of the Tritium Plume Between Well 699-37-E4 and Well 699-48-7 at the Hanford Townsite for CY 1982 and CY 1984

9 2 1 2 2 2 3 7 2

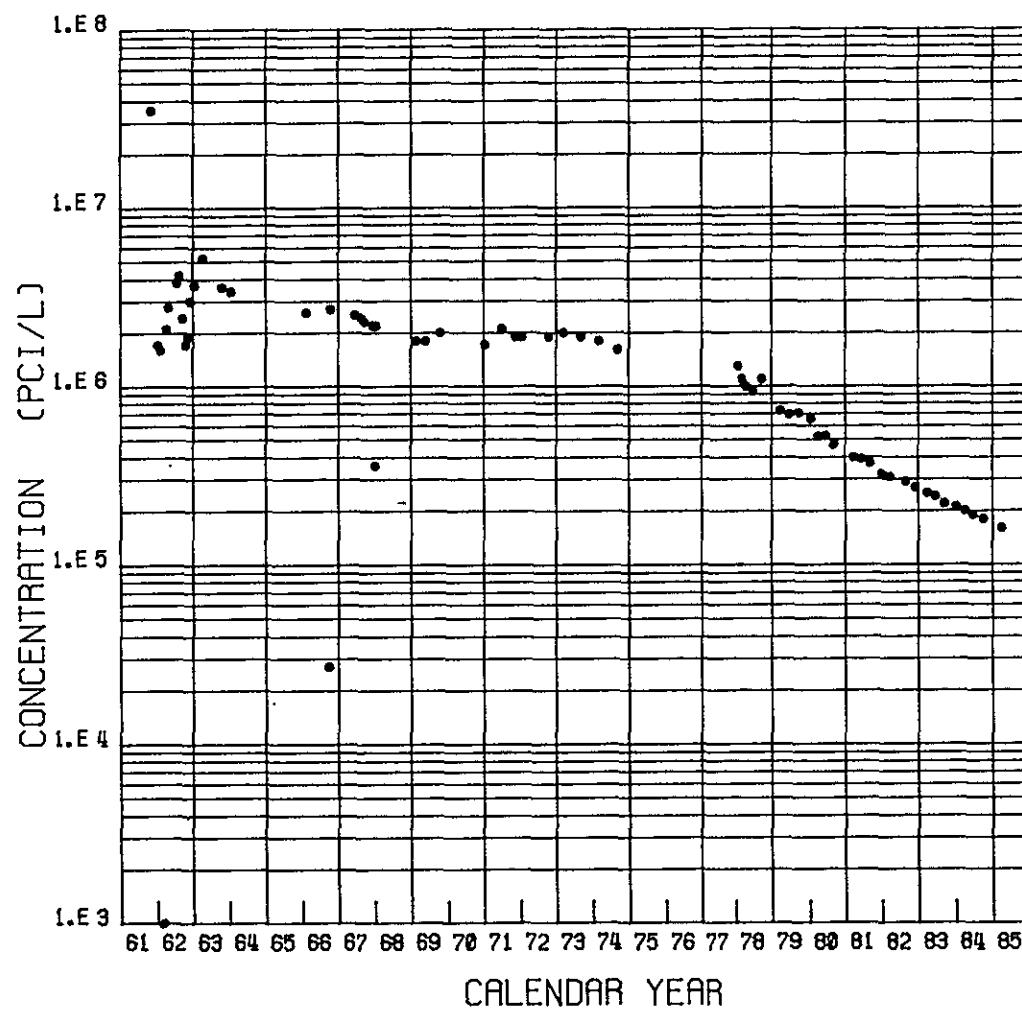
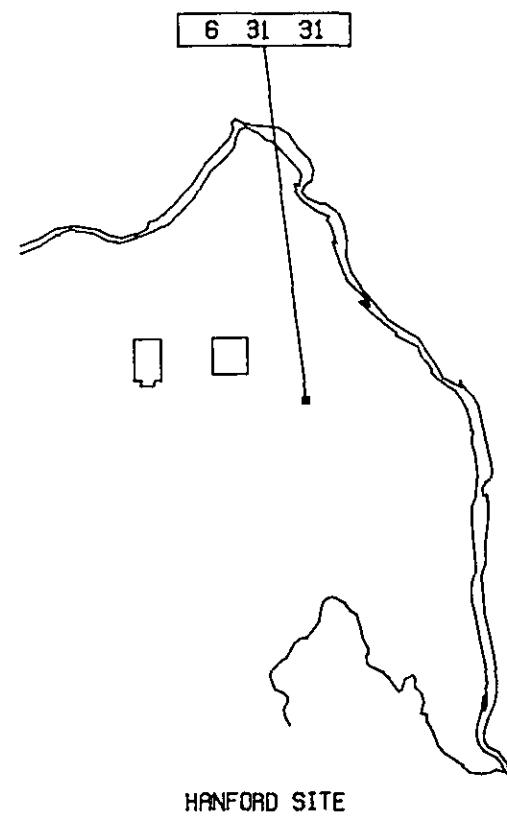
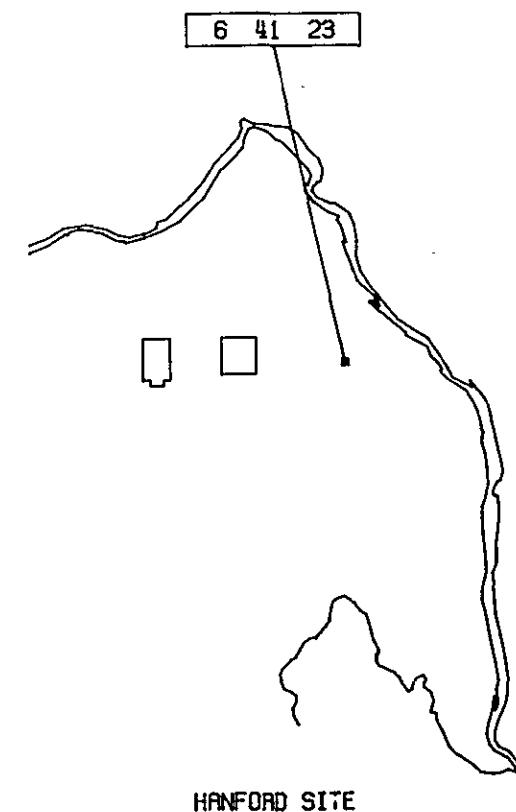
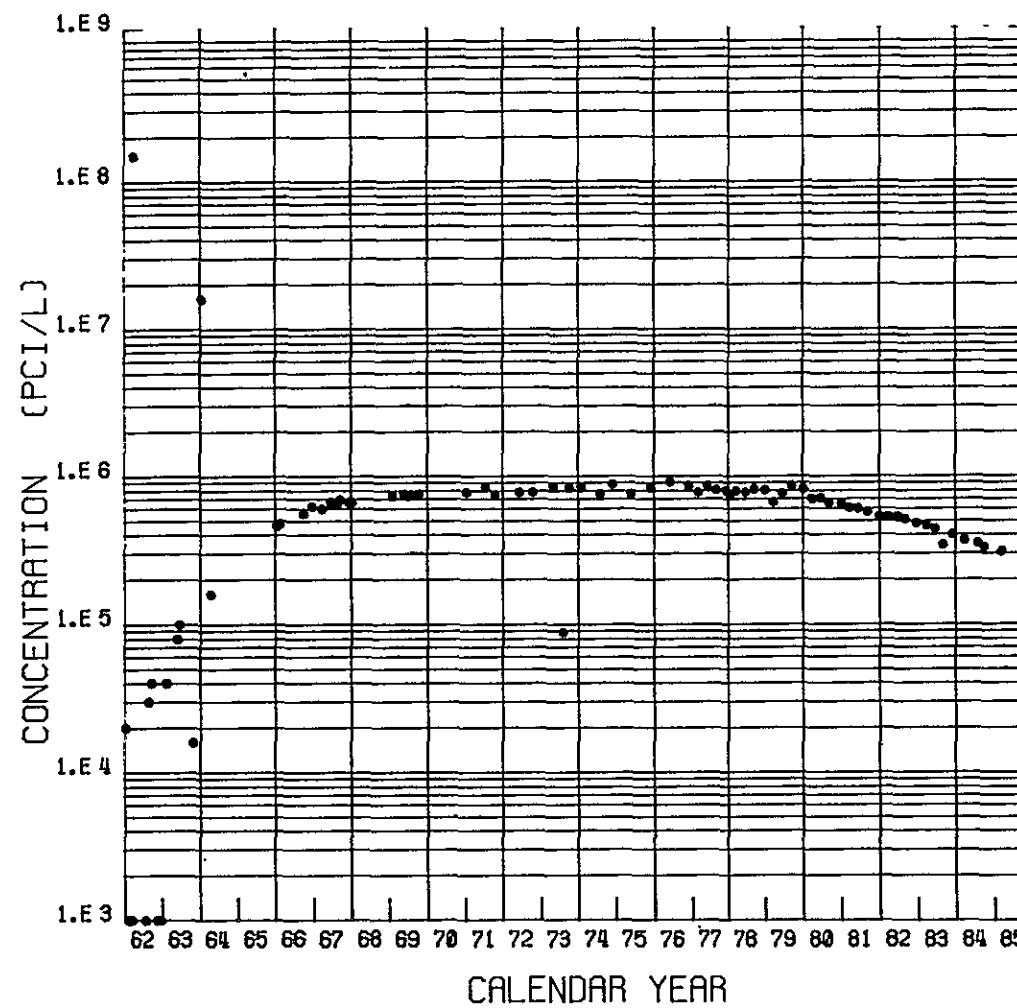


FIGURE 8. Tritium Concentrations in Well 699-31-31, 1961-1985



9 2 1 2 1 3 2 0 8 7 3



HANFORD SITE

FIGURE 9. Tritium Concentrations in Well 699-41-23, 1962-1985

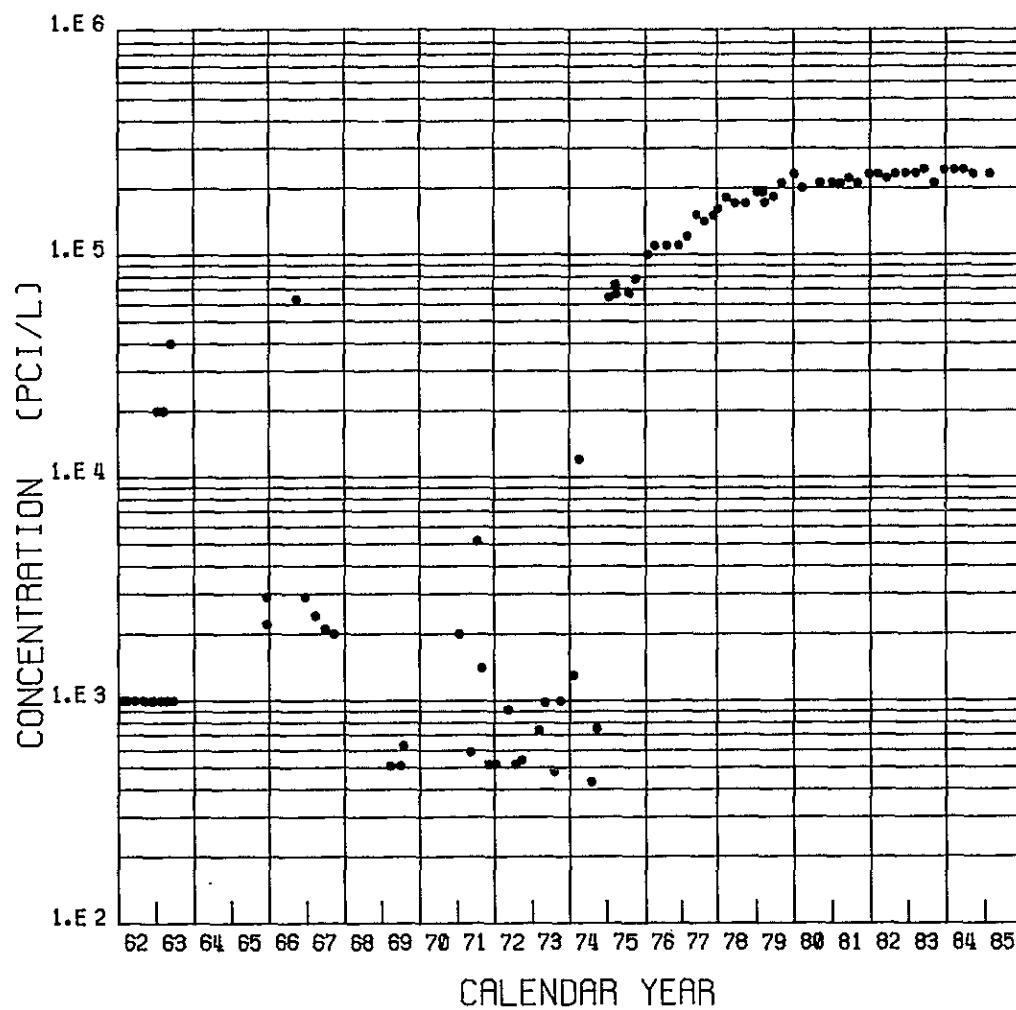
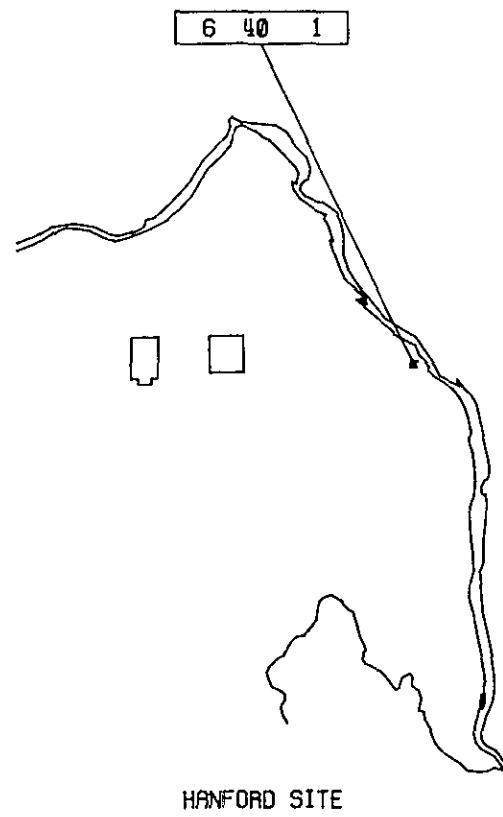


FIGURE 10. Tritium Concentrations in Well 699-40-1, 1962-1985



The average concentration and distribution of nitrate in the unconfined aquifer at Hanford in 1984 is shown in Figure 11. The nitrate plumes are divided into four concentration ranges: <4.5, 4.5 to 20, 20 to 45, and >45 mg/l. These ranges have been retained for comparative purposes with the map produced by Prater et al. (1984). The 1983 average nitrate distribution is shown in Figure 11A. The analytical method for determining nitrate in ground-water samples changed during CY 1984. The Phenoldisulfonic Acid Colorimetric Procedure was replaced by the faster and, purportedly, more reliable and accurate Nitrate Specific Ion Electrode Method (Serne et al. 1975). Although some nitrate samples collected during the early part of CY 1984 were analyzed by the phenoldisulfonic acid method, these analyses were not used to construct the nitrate plume map. The analytical data from the older method has been used in the various figures to illustrate the nitrate trend over time. The more reliable analyses from the newer Nitrate Specific Ion Electrode Method were incorporated into the CY 1984 plume map (Figure 11). The result of this change may be seen by comparing this year's map with the nitrate maps from the previous ground-water reports (see Figure 11A for the 1983 Average Nitrate distribution). Most of the nitrate concentrations analyzed by the electrode method proved to be greater than those analyzed by the older method, with most values being 40 to 100% greater (see Table 4). Elevated concentrations were found near the 200, 100-D, 100-F, 100-H and 100-K Areas and to the south and southeast of Gable Mountain. Results of samples analyzed for nitrate in 1984 are contained in Appendix B.2, and the maximum, minimum, and average concentrations are summarized in Appendix A.

The addition of well 699-37-E4 (699-39-E3 in last year's ground-water report) during CY 1984 helped to define the nitrate concentrations near the Columbia River. During 1984, this well averaged 29 mg/l compared to the 45+ mg/l concentrations found in nearby wells immediately to the north. The concentrations in these wells indicate that ground water containing a narrow portion of the nitrate plume of approximately 50 mg/l is entering the river near the Hanford Townsite. This is the same area that is indicated

by the tritium plume map, previously mentioned. Data suggest that lower nitrate concentrations are entering the Columbia River south of well 699-37-E4 (Figure 11).

Nitrate in the main plume originating at the 200 Areas is gradually moving eastward in the general direction of the regional ground-water flow. By plotting the historical nitrate data and data from ground-water samples collected and analyzed by the Phenoldisulfonic Acid Colorimetric Procedure in CY 1984, the trend of nitrate concentration for a number of wells may be continued through a part of 1984. The historical nitrate data for wells 699-42-12A and 699-35-9 are shown in Figures 12 and 13, respectively. Both wells are located at the east edge of the highest nitrate concentrations within the main plume (Figure 11); well 699-42-12A is located within the highest concentration zone. Figures 12 and 13 both indicate an increasing nitrate trend. Well 699-41-23, represented by Figure 14, appears to have declining nitrate concentrations, suggesting the highest concentrations have passed to the east.

Figure 15 shows the nitrate concentrations found in well 699-46-4, which is located at the Hanford Townsite adjacent to the Columbia River (Figure 11). In Figure 15, a gradually increasing cyclic trend is revealed which is due to the fluctuations of the Columbia River and the seasonal release of water from Priest Rapids Dam and bank storage (Prater et al. 1984).

The nitrate plume is also moving to the southeast and to the south as indicated by the plot of concentrations from well 699-2-3, shown in Figure 16. The data indicate a slight increase in nitrate concentrations in this well. The slope of the data plotted on this figure is gradual, possibly inferring a slower rate of ground-water movement in this area.

The effects of ground-water mounding in and near the 200 Areas have created artificial ground-water gradients, which have caused a trend of increasing nitrate concentrations to the northwest of the 200-W Area (Figure 11). This movement of nitrate is probably the result of lateral dispersion caused by the mounding of waters beneath U Pond in the 200-W Area. If this

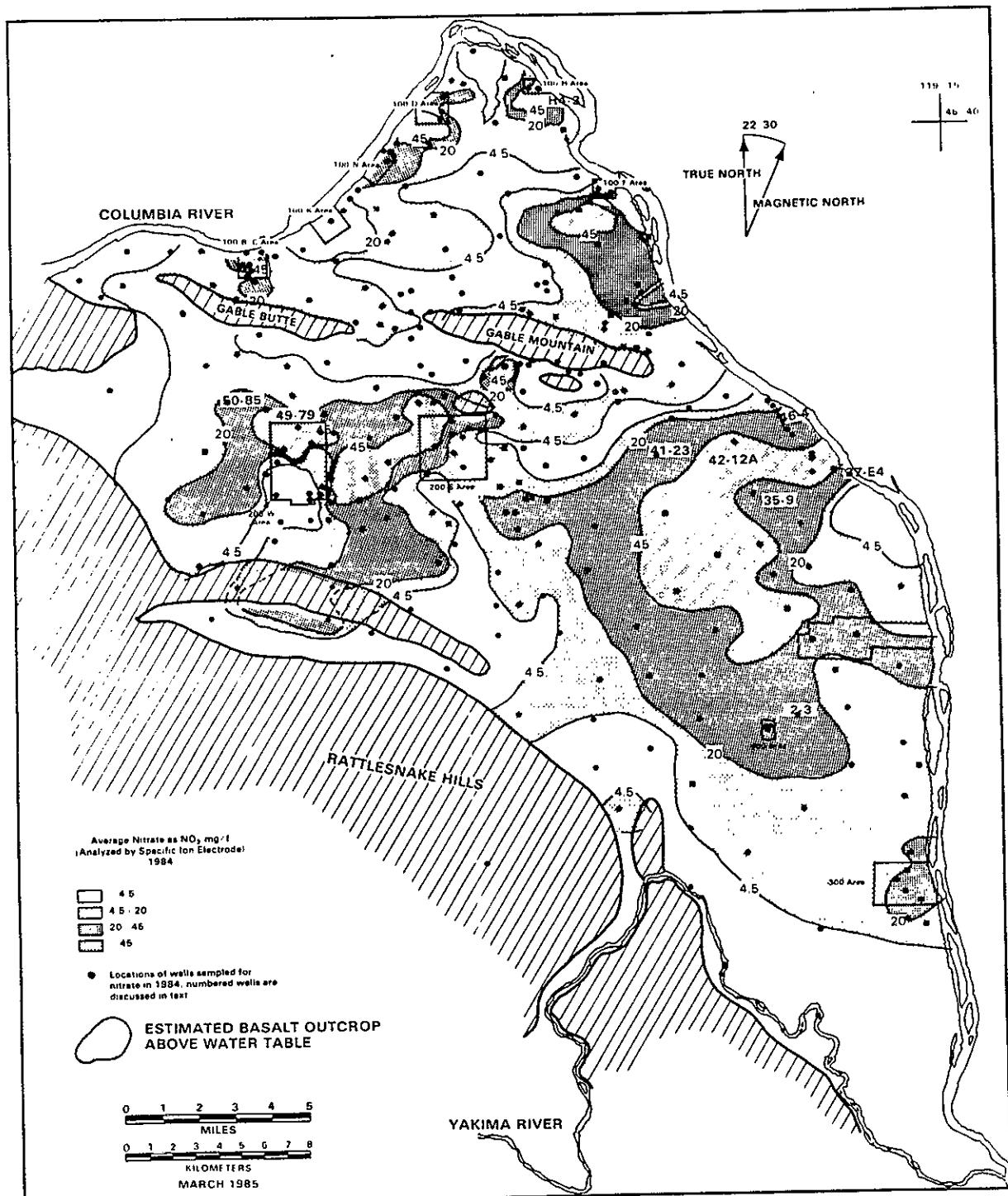
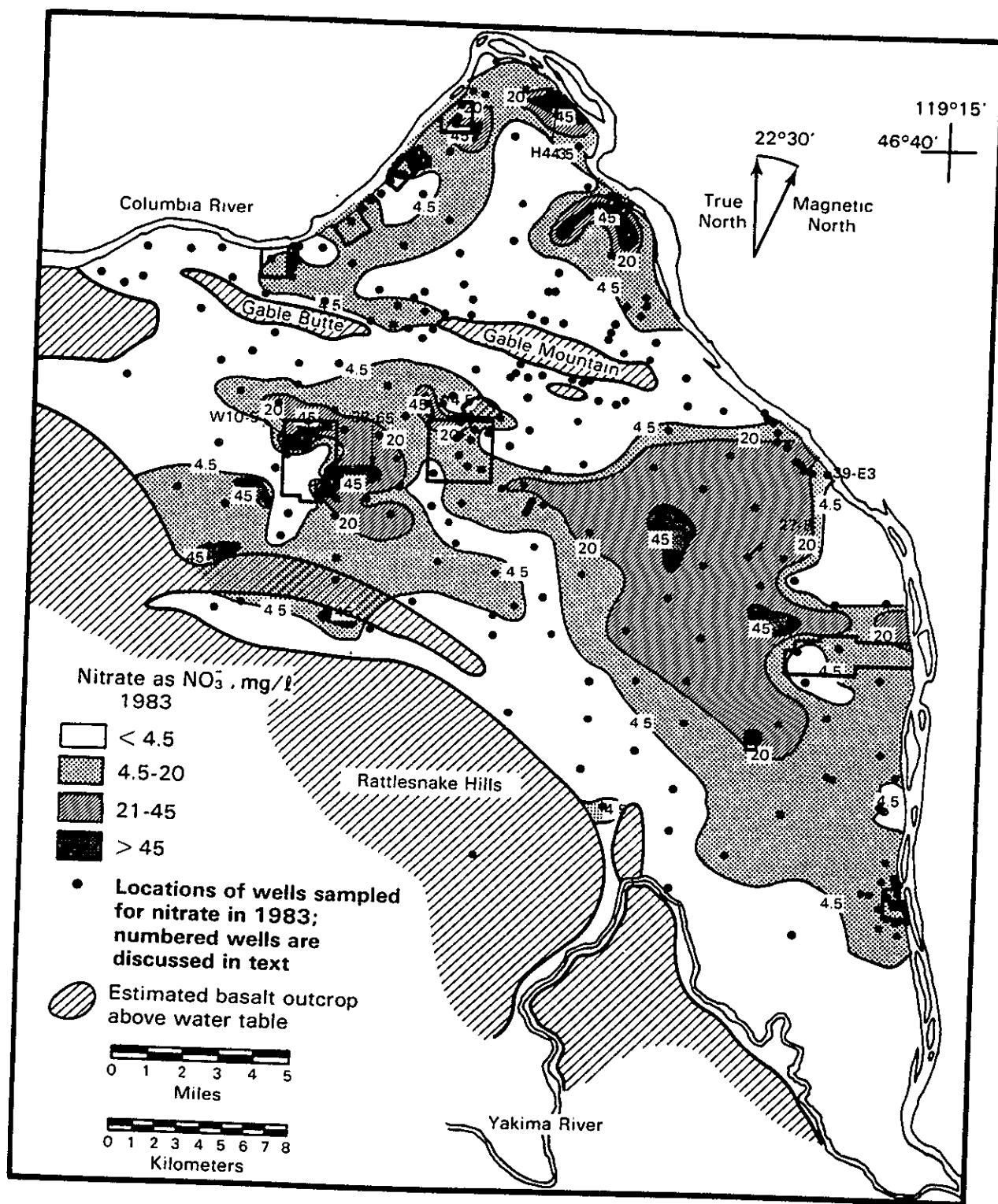


FIGURE 11. Average Nitrate Distribution in the Unconfined Aquifer, 1984



**FIGURE 11A.** Average Nitrate Distribution in the Unconfined Aquifer, 1983

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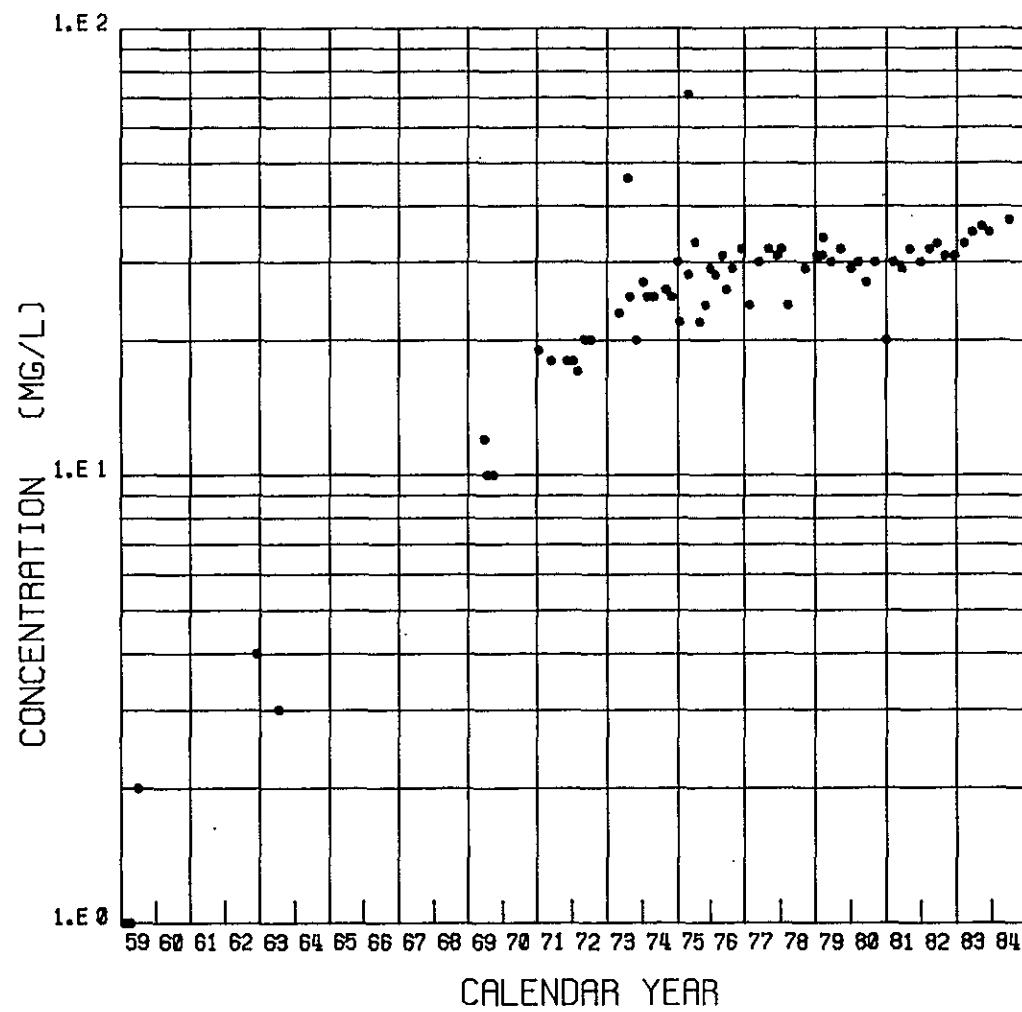
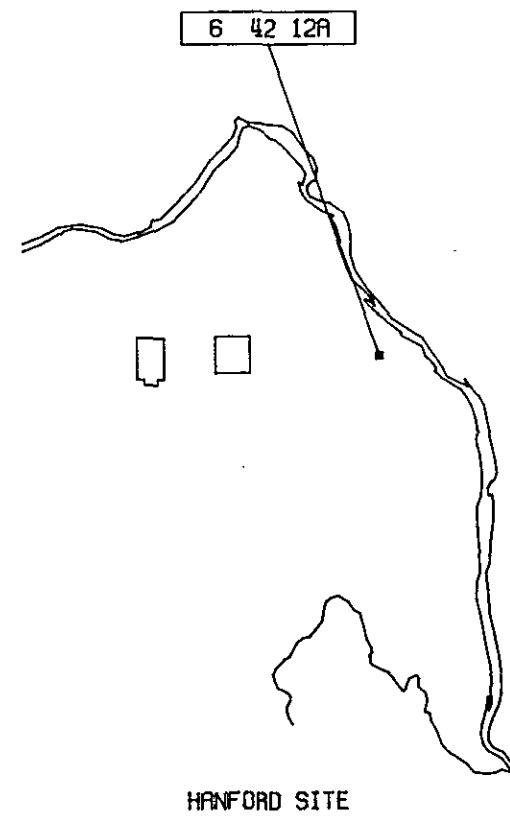
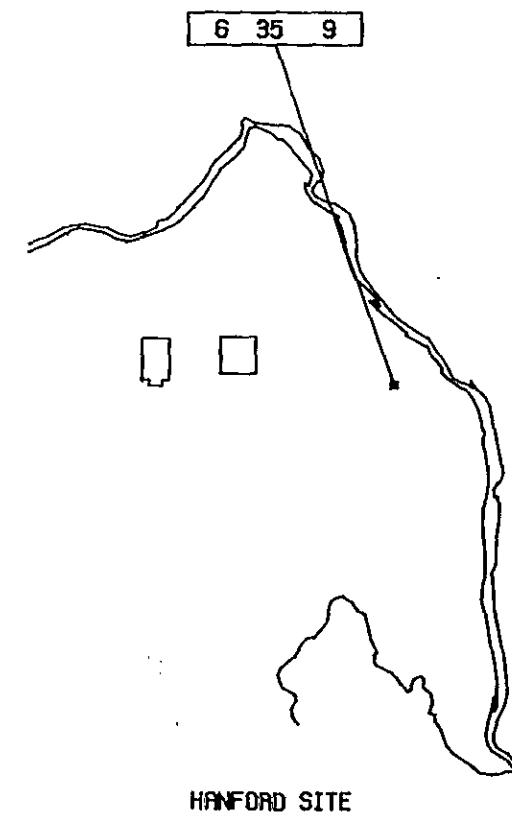
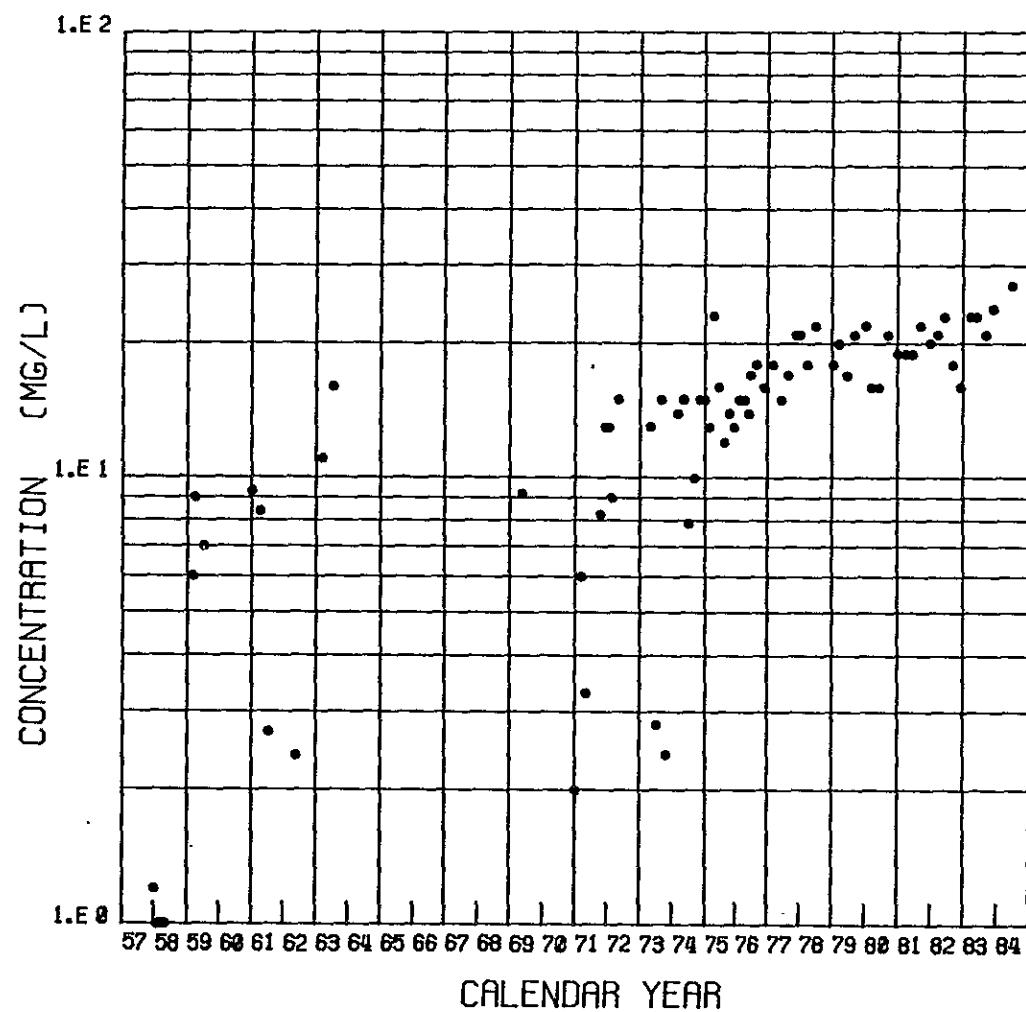


FIGURE 12. Nitrate Concentrations in Well 699-42-12A, 1959-1984



9 2 1 2 3 3 2 7 3 7 9



**FIGURE 13.** Nitrate Concentrations in Well 699-35-9, 1957-1984

9 2 1 2 . 3 2 0 0 0 3 0

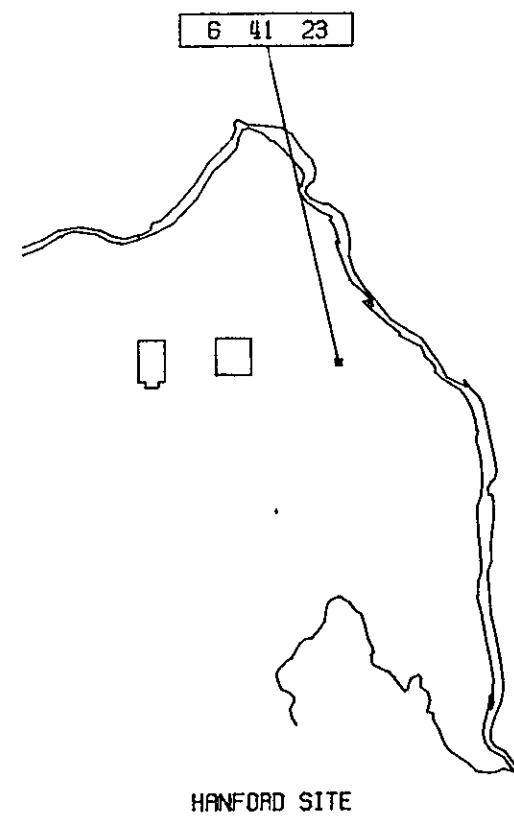
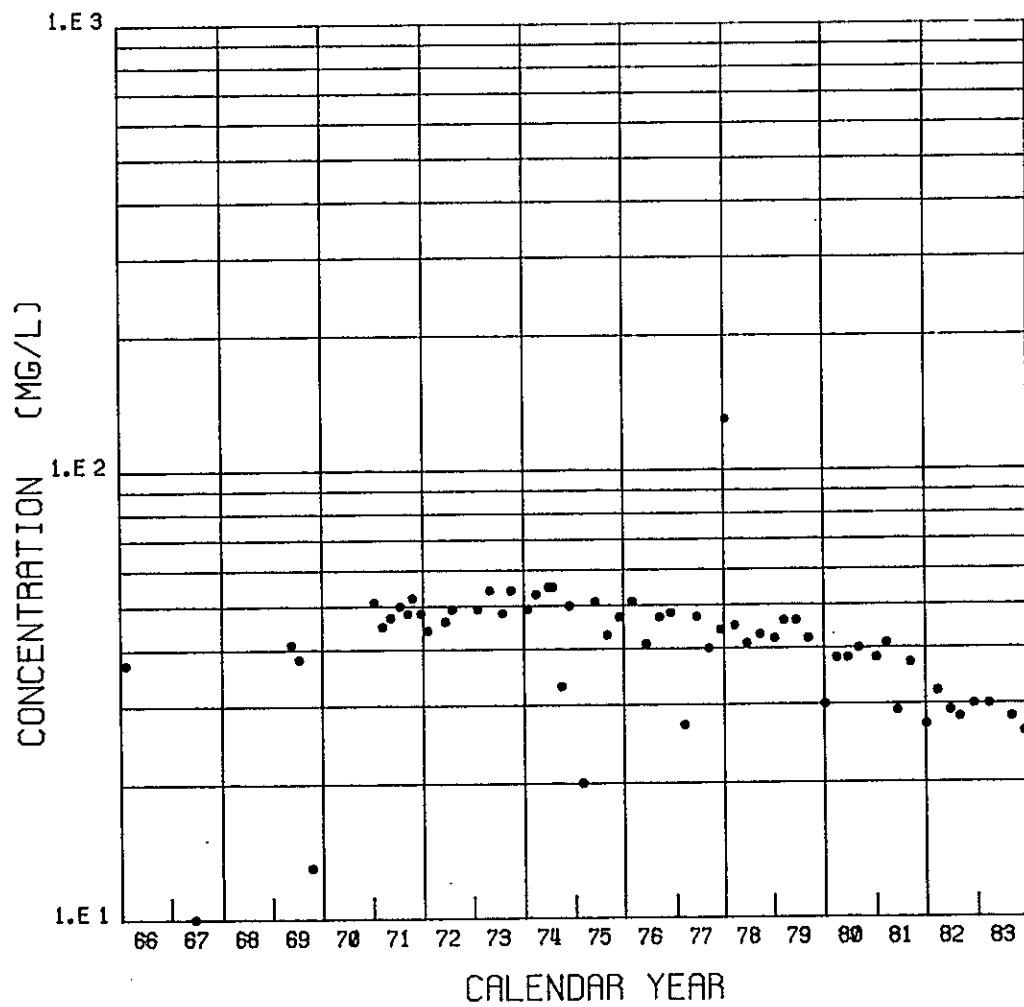
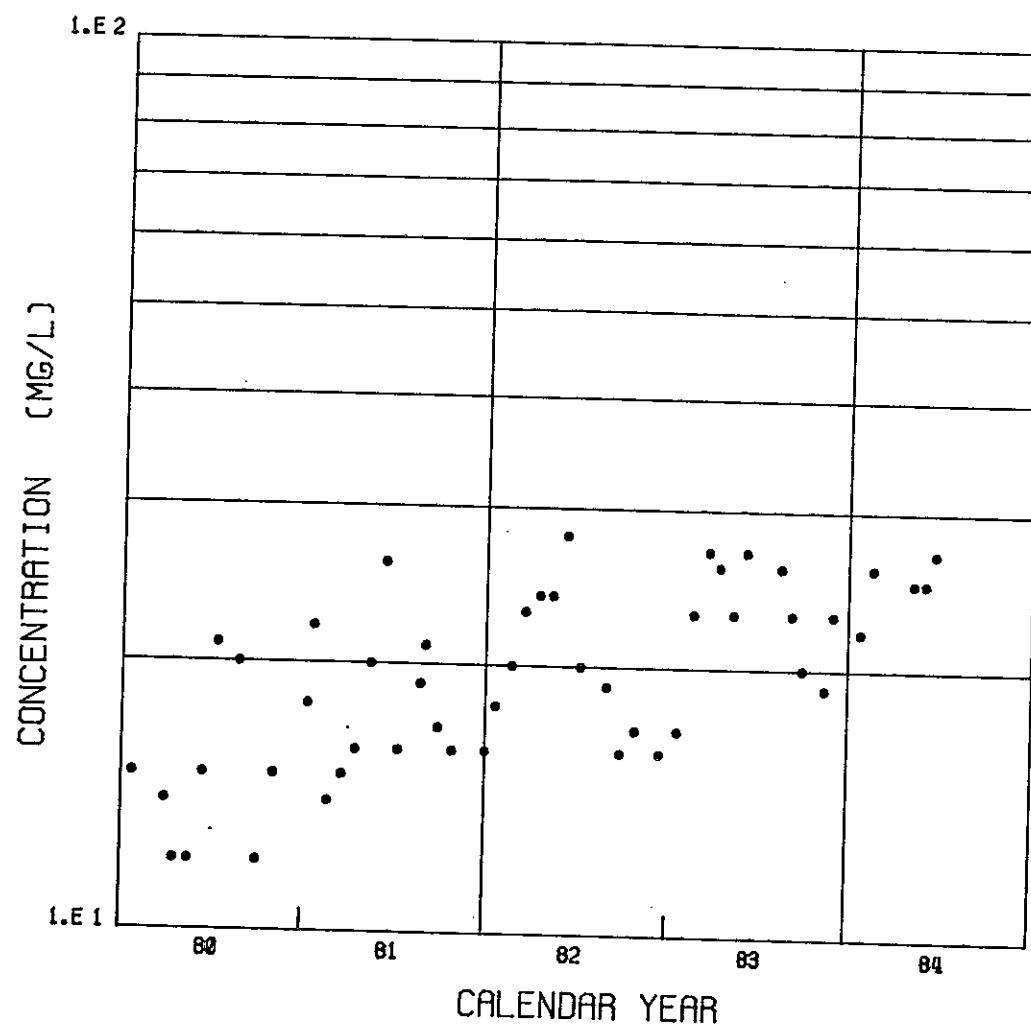


FIGURE 14. Nitrate Concentrations in Well 699-41-23, 1966-1984

9 2 1 2 , 9 2 0 8 3 1



9 2 1 2 1 3 2 1 3 3 2

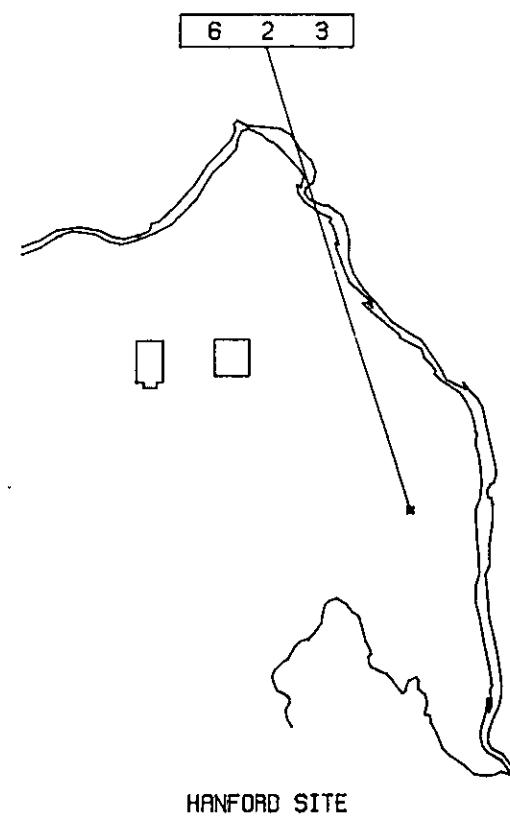
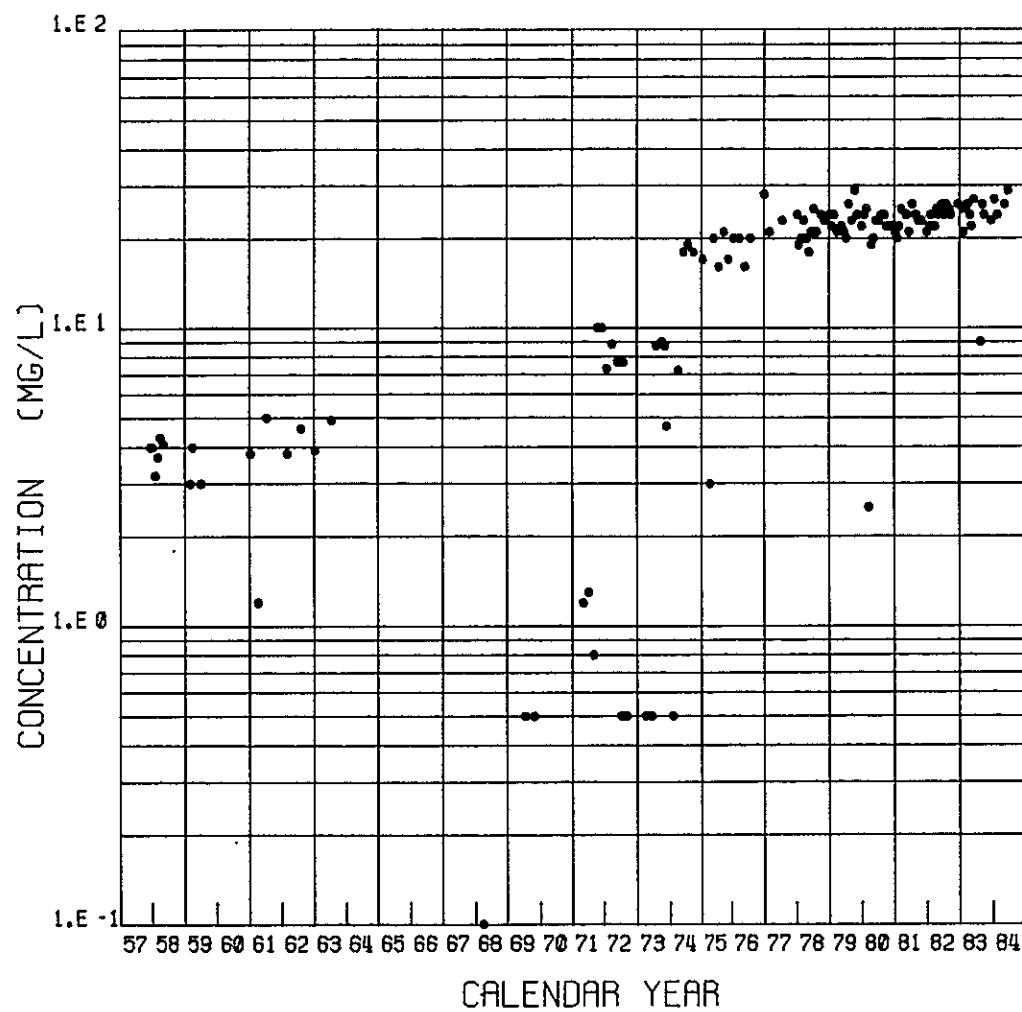


FIGURE 16. Nitrate Concentrations in Well 699-2-3, 1957-1984

trend continues, the high nitrate concentrations shown in well 699-49-79 (Figure 17) will be found in well 699-50-85 (Figure 18). However U Pond has been decommissioned, and there are no plans for a replacement pond at that location.

Well 199-H4-3 and adjacent wells are used to monitor the 183-H solar evaporation facility at the 100-H Area. This facility concentrates wastes containing nitrate, ammonium, sulfate, copper, fluoride, uranium, manganese, and some chromium disposed in quantities, as shown in Table 9. Nitrate concentrations have been decreasing since 1978, when the use of an unlined basin was discontinued (Greager 1982) (Figure 19). Despite the change in nitrate analytical methodology, nitrate concentrations continued to decrease in the 100-H Area throughout 1984. The first sample collected from well 199-H4-3 during CY 1984 was sampled in February and analyzed using the Phenoldisulfonic Acid Method. The nitrate concentration was reported as 1,200 mg/l. The next three samples collected and analyzed using the specific electrode method resulted in successively decreasing concentrations of 960, 610 and 450 mg/l.

**TABLE 9. Quantities of Materials Discharged to the 183-H Evaporation Basins<sup>(a)</sup>**

Material	Quantity Discharged (lbs) <sup>(b)</sup>
Ammonium ion	660
Fluoride ion	33,000
Nitrate ion	430,000
Chromium	90
Copper	57,000
Manganese	300
Sulfate ion	140,000
Uranium	600

(a) Information provided by UNC Nuclear Industries.

(b) Total volume shipped to the 183-H Solar Evaporation Basin in CY 1984 was 420,000 gal of liquid.

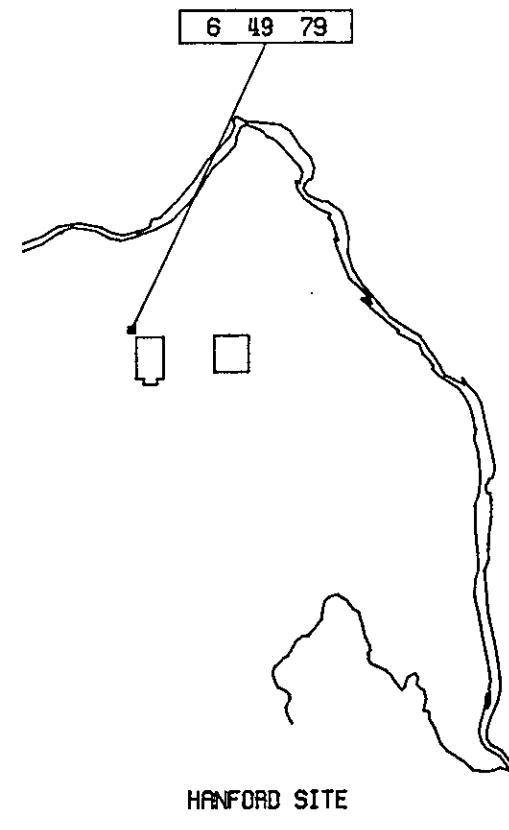
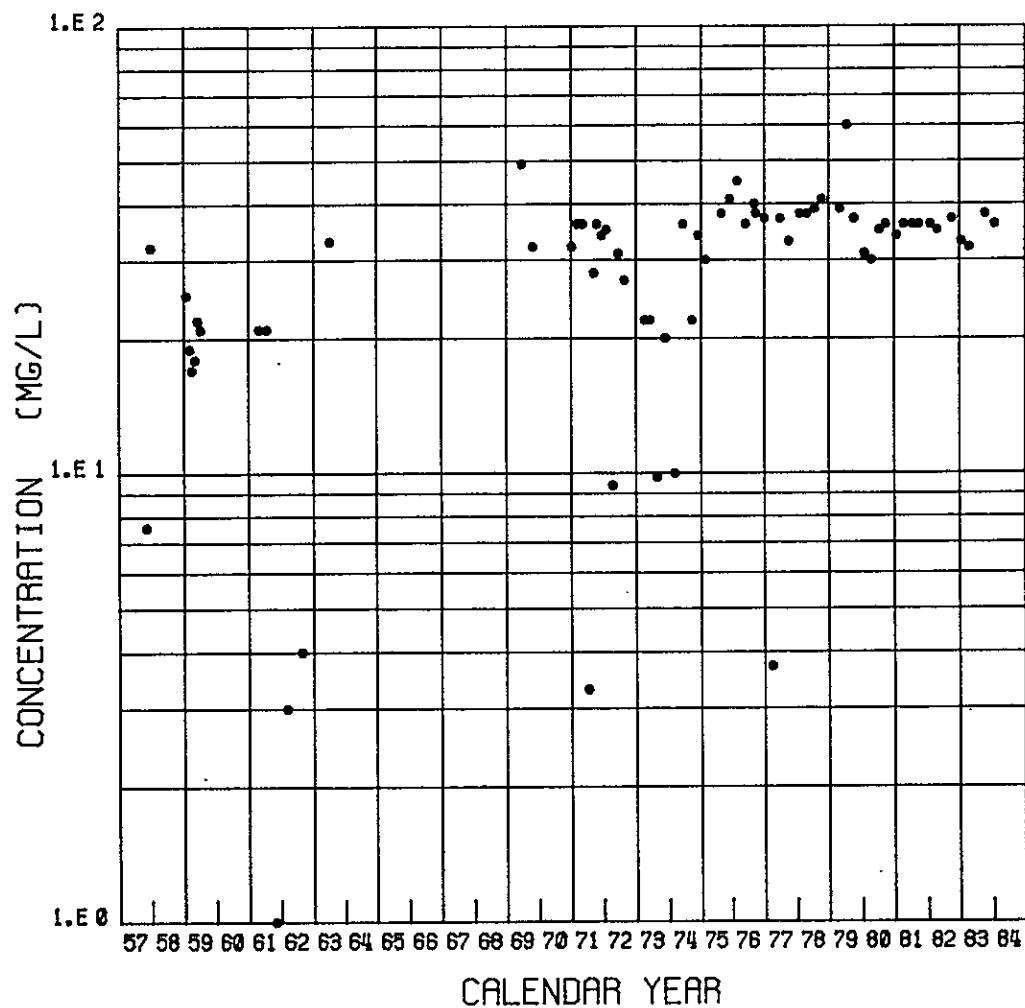
## OTHER RADIONUCLIDES IN THE UNCONFINED AQUIFER

Other radionuclides have been observed in measurable quantities in Columbia River water besides <sup>3</sup>H. These include: <sup>90</sup>Sr, <sup>129</sup>I, <sup>137</sup>Cs, uranium, and <sup>239,240</sup>Pu (Price et al. 1985). The presence of these radionuclides in the river have been partially attributed to the flow of ground water from the unconfined aquifer underlying the Hanford Site (Price et al. 1985). Tritium and uranium occur naturally in quantifiable amounts, and all are in the local environment as a result of worldwide atmospheric nuclear bomb tests and/or nuclear operations at Hanford.

Strontium-90 is a fission product of some environmental significance. It is a pure beta emitter (average beta energy of 195.8 keV and a maximum energy of 540 keV) decaying with a half-life of 28.6 years. It may be ingested by human beings in milk or in agricultural produce, after which it concentrates in the bone (Kathren 1984). Much of the <sup>90</sup>Sr in the environment is the result of atmospheric nuclear bomb tests. However, some is contributed by uranium fuel-cycle operations, specifically reactor and fuel-reprocessing operations.

On the Hanford Site, the 100-N Area and past operations of the Separations Plants, located in the 200-E Area, are probable sources of <sup>90</sup>Sr found in the ground water. Strontium-90 concentrations averaged  $0.14 \pm 0.020$  pCi/l in the Columbia River upstream of the Hanford Site and  $0.17 \pm 0.041$  pCi/l at the downstream sampling location (Price et al. 1985). Some increased <sup>90</sup>Sr concentrations that were above the DOE Concentration Guide of 300 pCi/l (see Appendix B.1) have been found in environmental well-water samples collected adjacent to the 100-N Area in CY 1984. Strontium-90 has also been detected in the springs along the Columbia River shoreline near the 100-N Area. UNC Nuclear Industries reported that a total of 7 Ci of <sup>90</sup>Sr, with an average concentration of 3,500 pCi/l, had been released to the Columbia River via this spring discharge. However, spring dis-

9 2 - 15 . 2 ) 3 4



**FIGURE 17.** Nitrate Concentrations in Well 699-49-79, 1957-1984

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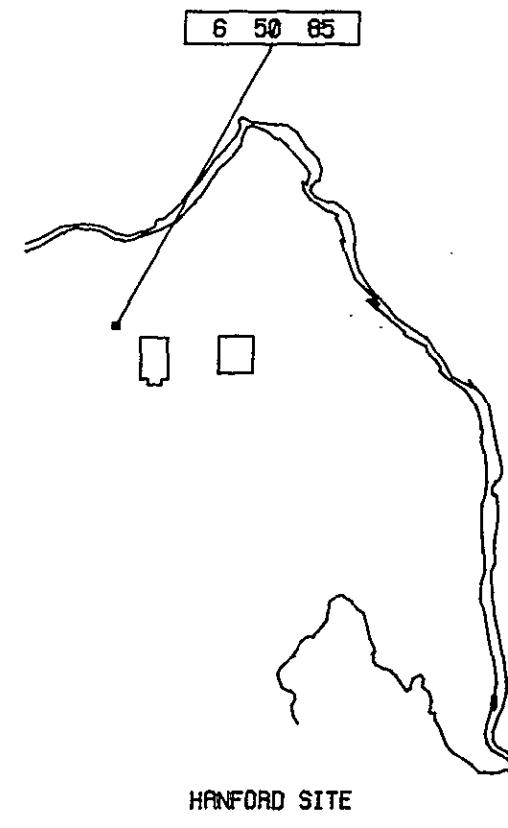
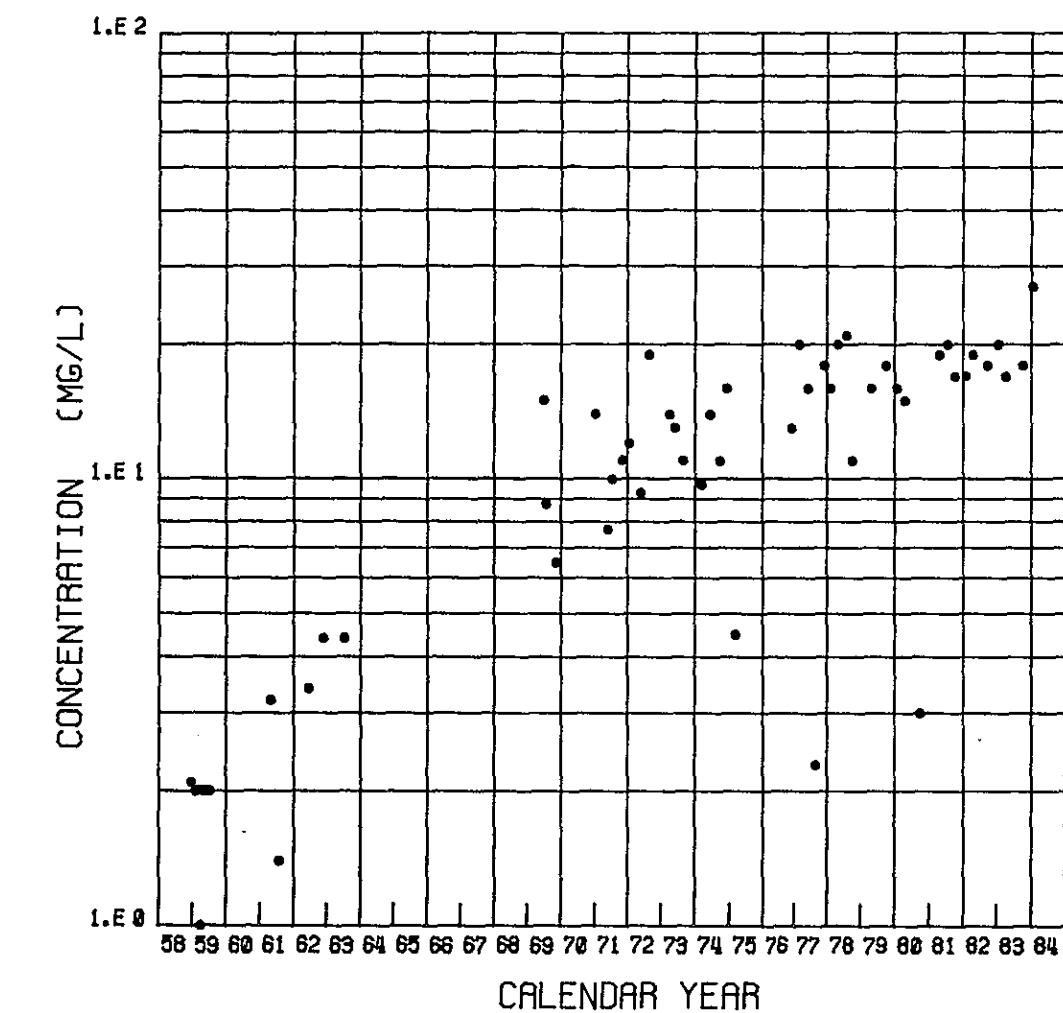


FIGURE 18. Nitrate Concentrations in Well 699-50-85, 1958-1984

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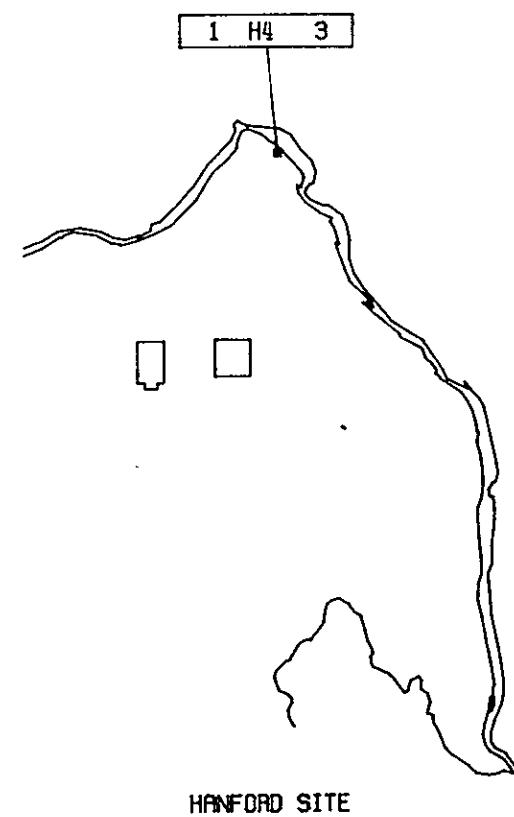
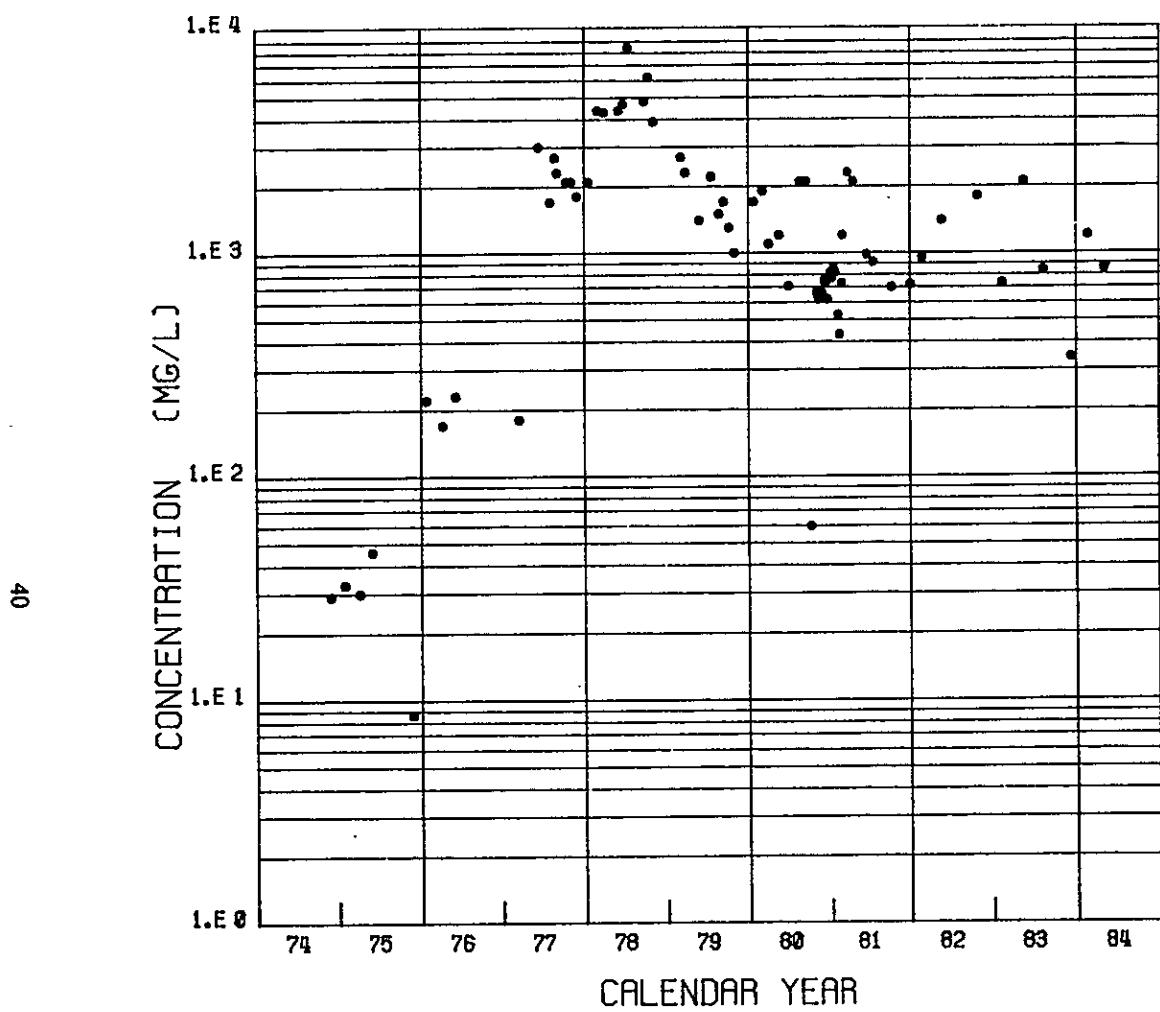


FIGURE 19. Nitrate Concentrations in Well 199-H4-3, 1974-1984

charge estimated by UNC ( $7 \times 10^7$  ft<sup>3</sup>/yr), and Columbia River flow estimated to be  $3.55 \times 10^{12}$  ft<sup>3</sup>/yr (Price et al. 1985), suggest that the <sup>90</sup>Sr in spring discharge would only contribute 0.07 pCi/l to the Columbia River once it is diluted by river flow. This concentration is well below the Drinking Water Standard (DWS) of 8 pCi/l, established by EPA. In spite of this, corrective steps have since been undertaken in accordance with UNC technical specification requirements.

Iodine-129 is another radionuclide that has been reported in Columbia River water samples (Price et al. 1985). Because of its low specific radioactivity, and because it decays by emitting relatively low energy beta (maximum energy is 150 keV) and gamma (40 keV) radiation<sup>(a)</sup>, <sup>129</sup>I has not been considered a significant health hazard (Kathren 1984). External pathways of exposure are not considered as important as that by ingestion of milk and vegetables contaminated by air or water, or by the ingestion of drinking water or aquatic foods. Iodine concentrates in the thyroid after ingestion and thus, the thyroid is the limiting body organ in determining dose. Iodine-129 is of significance in ground water, primarily because of its relatively long half-life of  $1.6 \times 10^7$  years and the potential for accumulation in the environment from long-term, chronic releases from nuclear facilities (Soldat 1976). It is of interest at the Hanford Site, primarily because of the possible siting of a High Level Waste (HLW) repository and the effect such a facility would pose to future generations.

Iodine-129 occurs as a man-made fission product through the decay of <sup>129</sup>Te. The primary sources of <sup>129</sup>I are effluents from nuclear fuels reprocessing plants, since nearly all the fission products generated by reactors are normally retained within the fuel cladding (Soldat 1976). On the Hanford Site, the main contributor of <sup>129</sup>I to the ground water would be the PUREX facilities and associated discharge cribs. During 1981 and 1982, the Columbia River was sampled at three locations to determine the possible source of <sup>129</sup>I from ground water discharging to the river. River samplers were established upriver of 100-N Area, downstream of N Reactor but

upriver of the Hanford Townsite and downriver of the Hanford Site. The results of that study indicated that N Reactor discharges did not contribute detectable amounts of <sup>129</sup>I to the river, rather the majority of the elevated <sup>129</sup>I concentrations was being discharged from the 200 Area ground-water plume at the Hanford Townsite (McCormack and Carlile 1984). These concentrations were the result of past operations of the PUREX facilities and possibly earlier reprocessing plants located in the 200 Areas. During CY 1984 upstream and downstream concentrations of <sup>129</sup>I were reported to have been  $1.2 \times 10^{-5} \pm 3.8 \times 10^{-6}$  and  $7.4 \times 10^{-5} \pm 2.9 \times 10^{-5}$  pCi/l, respectively (Price et al. 1985).

Iodine-129 in the ground water has not been monitored systematically on the Hanford Site to this date. When high levels of <sup>3</sup>H are observed, analytical work is then performed for <sup>99</sup>Tc, <sup>90</sup>Sr, and <sup>129</sup>I. Iodine-129 has been sampled at random intervals in various wells located within the site boundaries, and more specifically, in those wells within or adjacent to the 200 Areas. Table 2 lists the wells sampled for <sup>129</sup>I within the last 2 years, and the resulting concentrations found in those wells. Concentrations ranged from  $2.0 \times 10^{-5}$  to 22 pCi/l in the ground water; all below the DOE Concentration Guide (CG) of 60 pCi/l. Some of the wells listed will not appear in Figure 4, but can be located in *Hanford Wells* by McGhan, Mitchell and Argo (1985).

Cesium-137 and <sup>239,240</sup>Pu have been detected in Columbia River water samples. However, upstream concentrations have been nearly identical to those measured downstream (Price et al. 1985). Both of these radionuclides are ordinarily considered to be rather immobile in the unsaturated soils and in the ground water because of their good ion-exchange characteristics. Although both radionuclides have relatively long half-lives (the half-lives of <sup>137</sup>Cs, and <sup>239,240</sup>Pu are 30 years, 24,390 years, and 6,580 years, respectively<sup>(a)</sup>), because of their lack of mobility, they are monitored in ground water predominantly near the 100, 200 and 300 Areas (see Appendices B.1 and C).

(a) U.S. Department of Health, Education and Welfare, 1970.

(a) U.S. Department of Health, Education and Welfare, 1970.

Uranium, as found in nature, consists of three isotopes in the proportion 99.27%  $^{238}\text{U}$ , 0.72%  $^{235}\text{U}$ , and 0.0057%  $^{234}\text{U}$  (Fairbridge 1972). These isotopes have half-lives of  $4.51 \times 10^9$ ,  $7.13 \times 10^8$ , and  $2.48 \times 10^5$  years, respectively. Uranium decays by emitting alpha, beta, and gamma radiation, thermal energy emission and by spontaneous fission (Fairbridge 1972). The alpha particle energies range from 4.15 Mev ( $^{238}\text{U}$ ) to 4.77 Mev ( $^{234}\text{U}$ ), while thermal X-rays may not exceed several hundred keV. (a) Because of the high alpha energies, the main health problem for living creatures is internal dose caused by inhalation or ingestion of uranium particles or the daughter products, which may occur as gases or solids. Natural uranium is ubiquitous and occurs in the environment in meteorites, tektites, and sedimentary, igneous, and metamorphic rocks (Fairbridge 1972), and in the ground and surface waters as it is leached from the surrounding rock. Uranium is sorbed readily onto soils under certain conditions of pH (low to neutral pH values), redox (reducing conditions), soil cation exchange capacities, and the availability of organics. However, the predominant factors that determine mobility of uranium in soils is the pH and Eh (oxidation - reduction potential) (Ames and Rai 1978).

The sources of processed uranium found in the ground water at the Hanford Site are the 200 Area facilities and the 300 Area, from fuel fabrication and laboratory waste disposal (USERDA 1975). Although ground water beneath the 200 Areas may contain uranium, because of the proximity to the Columbia River, the uranium that appears in the Columbia River probably is from natural sources, the 300 Area and/or from one of the solar evaporation basins, located in the 100-H Area, that leaked in 1978. Uranium concentrations in wells located adjacent to the 100-H solar evaporation basins ranged from less than detectable to 120 pCi/l, while concentrations in wells located within the 300 Area ranged from detection limit to 66 pCi/l. (The concentration guide for uranium is 600 pCi/l in an uncontrolled area.) Appendix B.1 shows the uranium concentrations in wells sampled during CY 1984. Background uranium concentrations in the Columbia River measured upstream of the Hanford Site averaged  $0.33 \pm 0.047$  pCi/l, while those measured downstream of the site averaged  $0.45 \pm 0.085$  pCi/l (Price et al. 1985).

Other radionuclides such as  $^{99}\text{Tc}$  and  $^{14}\text{C}$  are intermittently monitored in the ground water. Since they are found in such small quantities outside the disposal areas, they have not been monitored routinely by the PNL Environmental Evaluations Section.

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(a) U.S. Department of Health, Education, and Welfare, 1970.

## RADIOLOGICAL IMPACT

Ground-water transport of radionuclides at the Hanford Site represents a potential pathway for exposure to radiation via water obtained from wells that tap the unconfined aquifer or from the Columbia River into which the unconfined aquifer discharges. The following discussion examines these potential pathways.

### UNCONFINED AQUIFER

During 1984, drinking water for the FFTF (wells 699-S0-7 and 699-S0-8), the Yakima Barricade Guardhouse (well 699-49-100C), the Arid Land Ecology (ALE) site (spring and well 699-S18-51), and the Hanford Patrol Firing Range (well 699-S28-E0) was obtained from the unconfined aquifer, or in the case of the spring the confined aquifer. Figures 1 and 4 show the location of these drinking water sources. Untreated water samples were collected quarterly from taps at the various sites. Analyses were conducted to determine the concentrations of gross alpha,  $^{60}\text{Co}$ ,  $^{137}\text{Cs}$ ,  $^{90}\text{Sr}$ ,  $^3\text{H}$  and gross beta at all the sites, and additionally,  $^{106}\text{Ru}$  and  $^{22}\text{Na}$  at the FFTF. Calculations were performed by computer model (Napier, Kennedy and Soldat 1980) to determine if the annual dose exceeded the 4 mrem dose equivalent limit established by EPA (U.S. Environmental Protection Agency 1984) and the State of Washington (Washington State Department of Social and Health Services 1978) for drinking water.

Quarterly drinking water samples collected at the Patrol Firing Range, ALE, and the Yakima Barricade were at or below the detection limits for the various constituents listed above. At the FFTF, only tritium appeared at levels well above detection, or State of Washington or Federal EPA screening levels. Tritium concentrations ranged from 24,000 to 35,000 pCi/l, with a mean of 29,000 pCi/l. The annual intake of 250 l of water (based on an occupational consumption of one l/d for 250 d/yr) from this source, at the mean concentration of 29,000 pCi/l, would produce a 50-year committed whole body dose equivalent of 0.46 mrem. This calculated dose equivalent is less than 15% of the Washington State Drinking Water Standard of 4 mrem per year.

Additional monitoring of all DOE drinking water systems at Hanford is conducted by the HEHF. Information on this effort can be obtained from Maas (1985).

### COLUMBIA RIVER

Ground water from the unconfined aquifer enters the Columbia River via subsurface flow and springs that emanate from the riverbank, as reported by McCormack and Carlile (1984). The amount of tritium entering the river is calculated, based on the average concentrations of tritium in wells near the river and the flow rate of ground water into the river.

During 1984, tritium concentrations measured in wells at the old Hanford Townsite were in the range of approximately 100,000 to 250,000 pCi/l. The average concentration of tritium entering the river in this area during 1984 was estimated to be 172,000 pCi/l. Except for some small zones around the 100-B, C, 100-K, and 100-N Areas (see Appendix B.2 and Figure 5), ground water from the Hanford Townsite area represents the highest probable tritium concentrations entering the Columbia River.

Despite the fact that tritium enters the Columbia River near the Hanford Townsite, the impact to the river is low. The average annual flow rate from the unconfined aquifer into this section of the river near the Hanford Townsite has been estimated to be approximately 0.085 m<sup>3</sup>/sec (3 cfs). This is based on the ground-water Variable Thickness Transient (VTT) model developed for the Hanford Site (Reisenauer 1979). During 1984, the average Columbia River flow rate at Priest Rapids Dam was approximately 3,186 m<sup>3</sup>/sec (112,500 cfs) (Price et al. 1985). Ground water entering the Columbia River from the Hanford Site was, therefore, diluted by several orders of magnitude because of the difference between the river and ground-water flow rates. The tritium concentration in the river because of ground water in this area was calculated to be nearly 5 pCi/l. During 1984, the average background tritium concentration in the Columbia River upstream from the site was  $130 \pm 15$  pCi/l, and the average concentration downstream from the site was  $170 \pm 23$  pCi/l (Price et al. 1985). The contribution by ground water compared to background concentrations was not significant.

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## SPECIAL AND SUPPORTING STUDIES

Special studies are conducted in response to emergency situations or other nonroutine events, whereas supporting studies are carried out to reinforce the findings of the Ground-Water Monitoring Program. Both types of study provide additional data to help characterize the ground-water system, refine the hydrological and transport models, and determine the impact of site operations on the environment. In CY 1984 special studies included monitoring of perchloroethylene (PCE) that was spilled in the 300 Area, and a preliminary study to determine the distribution of organic substances in ground water at the Hanford Site; the last is described under the heading, "Organics Study."

### ACCIDENTAL DISCHARGES OF PERCHLOROETHYLENE

In 1982 and 1984 quantities of perchloroethylene (PCE) were accidentally discharged to a process waste trench in the 300 Area (Figure 20). PCE is used onsite mainly as a degreasing solvent, and both discharges resulted from a release of PCE during equipment cleaning and degreasing activities within the 300 Area. Following each discharge incident, samples were collected at wells near the waste trench to detect the presence and to monitor the movement of PCE.

PCE is classified by the EPA as a hazardous substance and a priority toxic pollutant. There are no uniform guidelines on permissible concentrations of PCE in water, and the State of Washington Department of Social and Health Services has yet to establish a set standard for Washington State waters. Ground water is not used for public water supply in the 300 Area. Figure 20 shows the location of the 300 Area process waste trenches and the 300 Area monitoring wells.

#### 1982 PCE Discharge

On November 4, 1982, 120 gal of PCE was accidentally discharged to the 300 Area Process Waste Trench. Sampling of ground water from

adjacent wells began immediately after notification of the release, five days after the discharge occurred. PCE was expected to rapidly reach the ground water because of the driving force of nearly two million gal/d of process waste water disposed to the trench. Wells adjacent to the trench were sampled, with two or three wells being sampled at a given time. Sampling schedules and wells were changed as needed to follow the movement of the PCE in the ground water.

Plots of PCE concentration over time for the applicable wells are shown in Figures 21 and 22. The highest level of PCE observed was 1840 parts per billion (ppb) in well 399-1-5, six days after the discharge (Figure 21). This well is located less than 100 ft from the southeast end of the trench and is hydrologically downgradient from the trench. As Figure 22 shows, peak concentrations of PCE decrease with increasing distance from the trench. Samples were also taken from 300 Area Spring #1 to determine the concentration of PCE that could be entering the river from the ground-water source. The highest concentration of PCE measured in the spring water samples was 270 ppb.

#### 1984 PCE Discharge

On July 6, 1984, 12 to 20 gal of PCE was accidentally discharged to the 300 Area Process Waste Trench. Sampling and analysis of the ground water adjacent to the trench began immediately after notification of the discharge on July 10, 1984. Data obtained from monitoring the previous PCE spill were used to select optimum sampling locations and schedules to monitor movement of the solvent from this spill.

The highest PCE concentration of 691 ppb occurred at well site 399-1-5 (Figure 23). Peak concentrations decreased to 294 ppb at well site 399-2-2, 1,000 ft from the trench (Figure 24), and were further reduced to less than 80 ppb at well site 399-2-1 (Figure 25) before entering the river

9 2 1 2 - 3 2 1 3 1 2

46

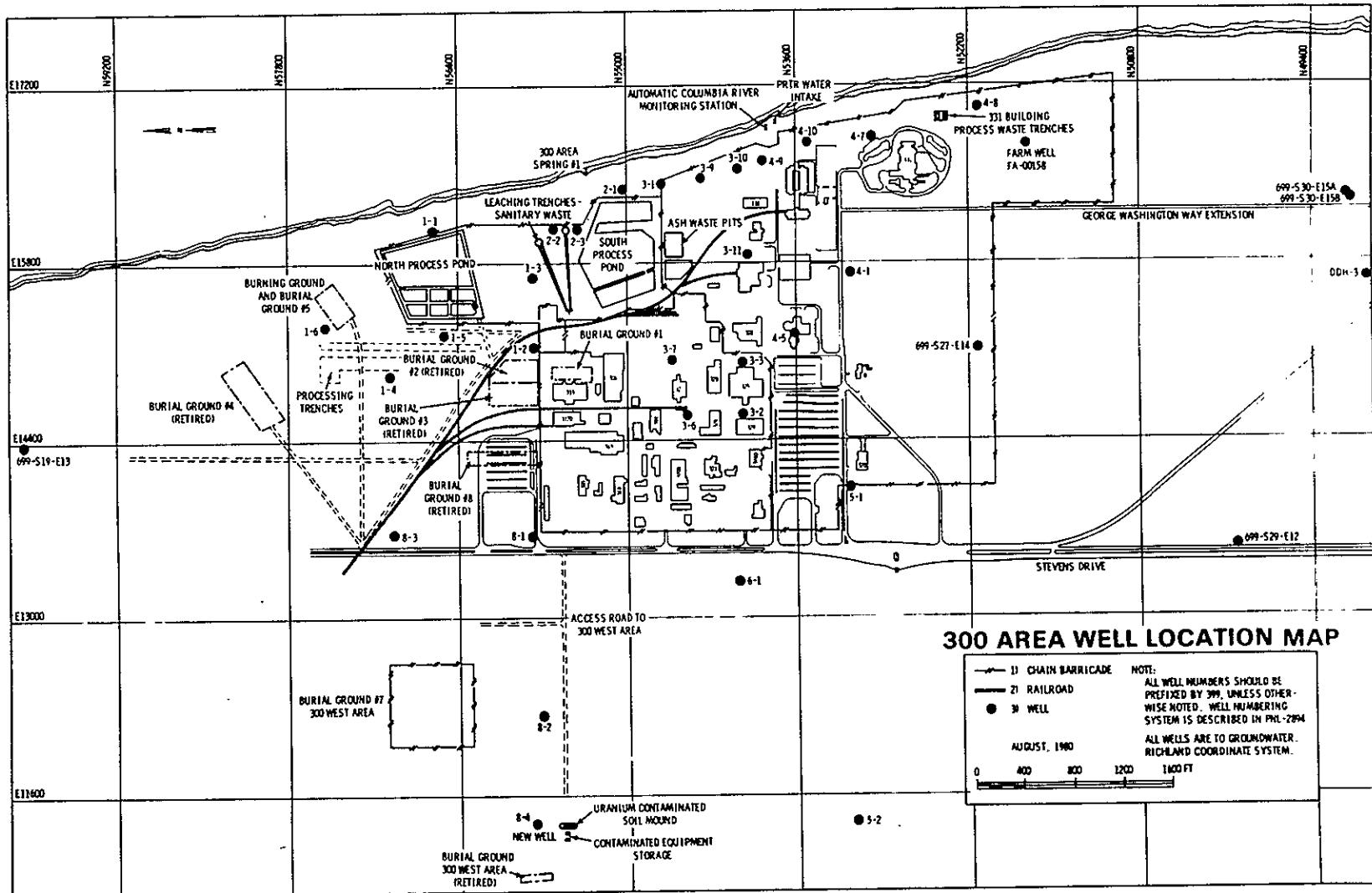
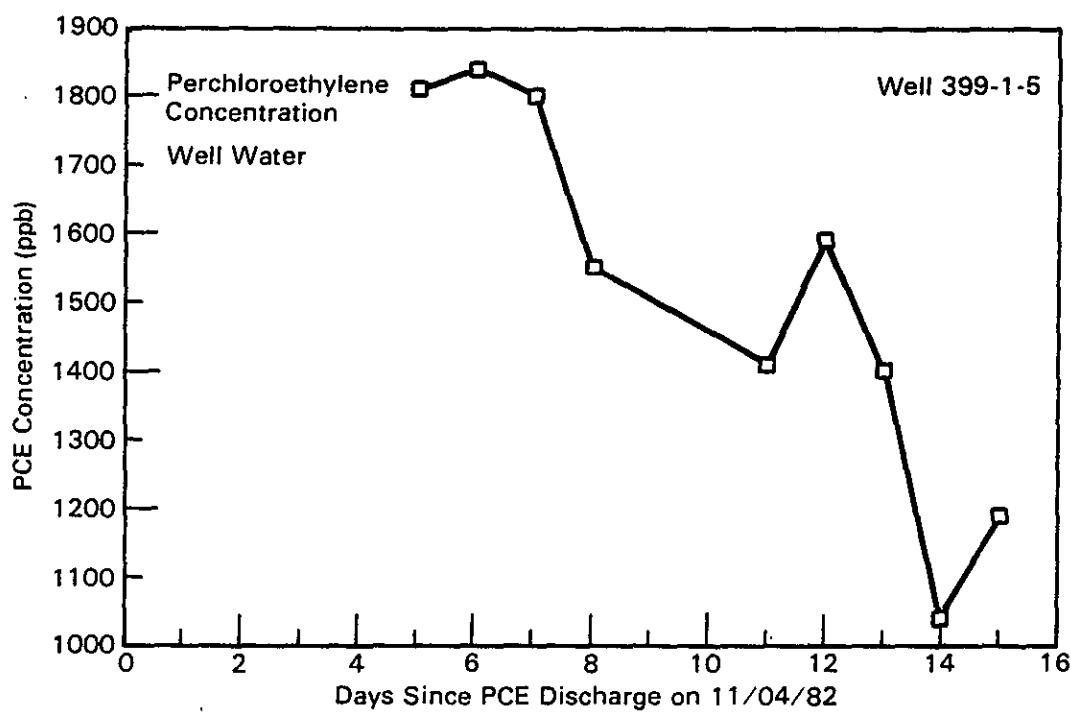
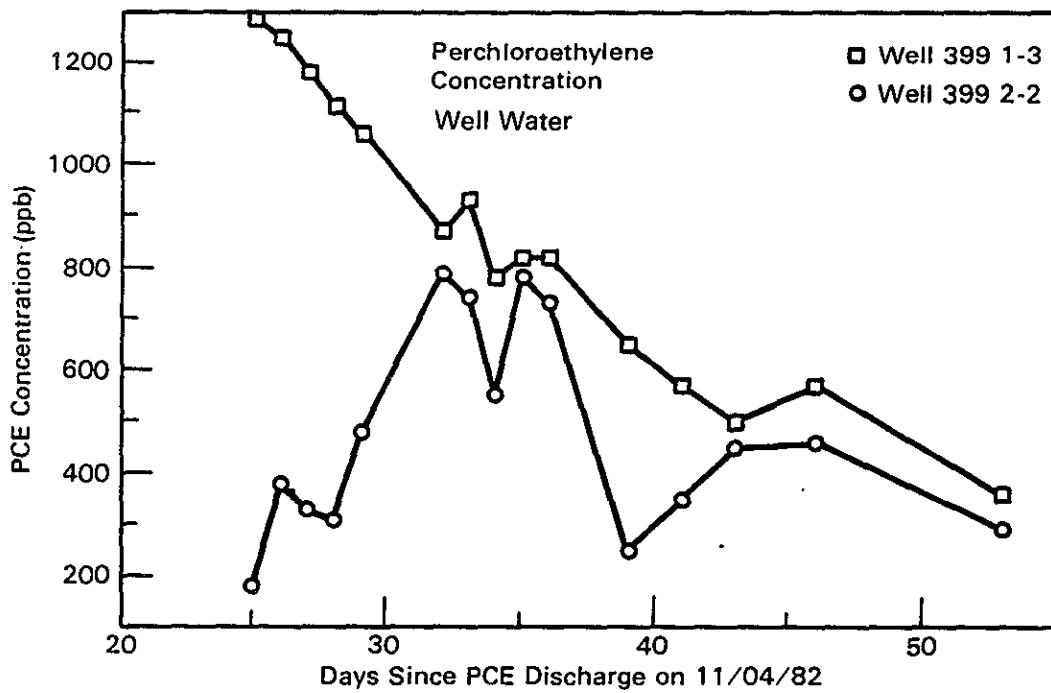


FIGURE 20. Location of Various Facilities, Waste Trenches, and Monitoring Wells in the 300 Area



**FIGURE 21.** Perchloroethylene Concentration in Well 399-1-5 after PCE Spill, November 4, 1982



**FIGURE 22.** Perchloroethylene Concentration in Well 399-2-2 after PCE Spill, November 4, 1982

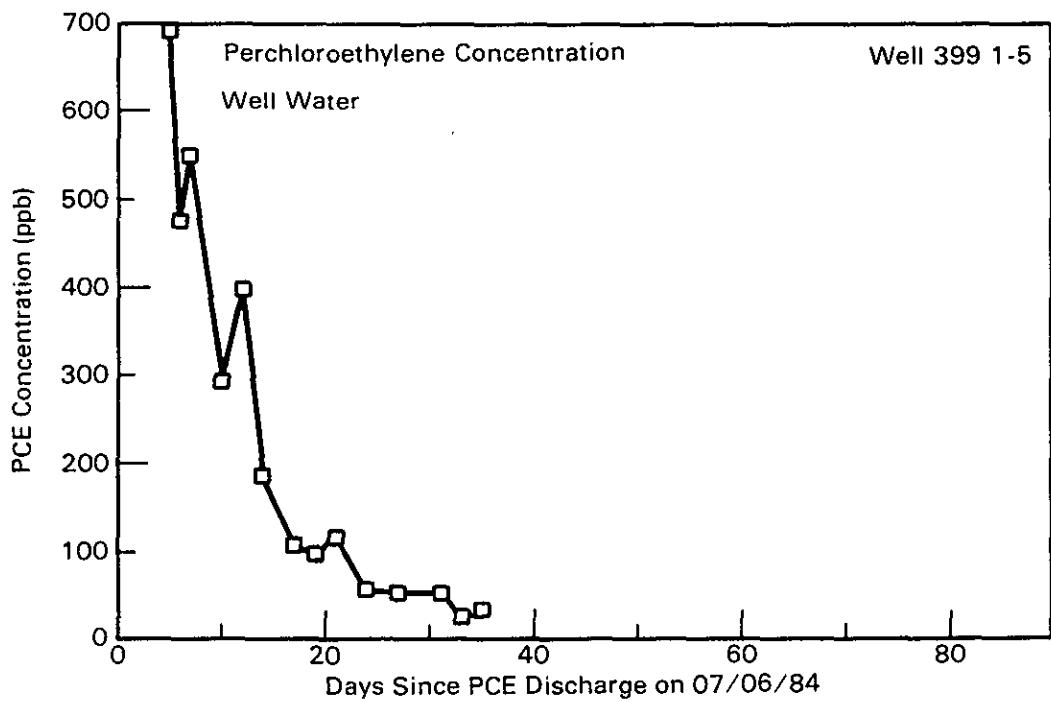


FIGURE 23. Perchloroethylene Concentration in Well 399-1-5 after PCE Spill, July 6, 1984

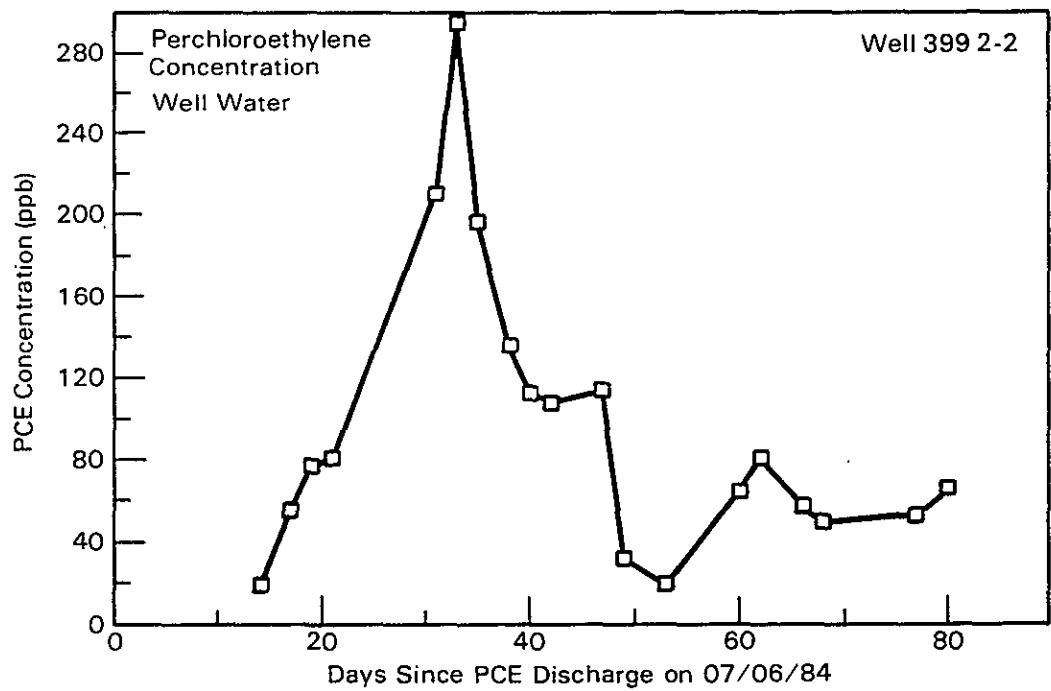


FIGURE 24. Perchloroethylene Concentration in Well 399-2-2 after PCE Spill, July 6, 1984

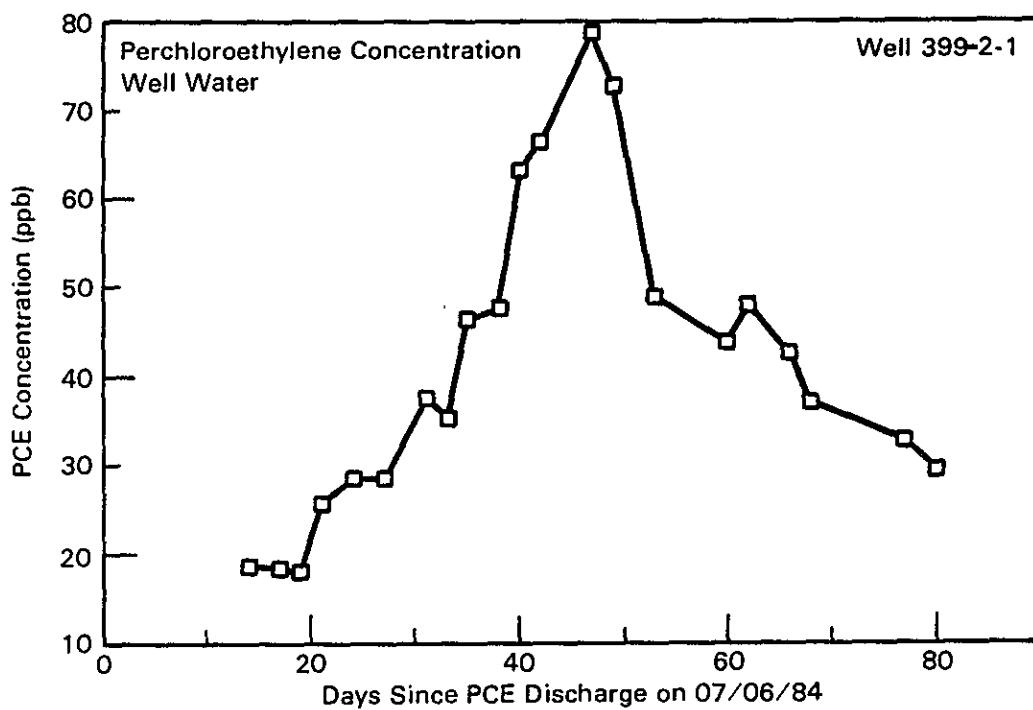


FIGURE 25. Perchloroethylene Concentration in Well 399-2-1 after PCE Spill, July 6, 1984

at about 1,600 ft from the trench. The arrival times of contaminant peaks indicate a rate of transport to be about 35 ft/day.

Sampling of the riverbank spring and Columbia River water at the shoreline detected low levels of PCE from less than one ppb to 20 ppb, at both locations, indicating that the contaminant did arrive at the spring and river sites. Analysis of water from wells adjacent to the river provide a more accurate indication of contaminant concentration entering the river from the ground-water source. However, the total amount of PCE entering the river cannot be determined without additional information on the vertical distribution of the PCE in the aquifer. This would require special well completion to permit sampling the ground water at various depths. Ground-water samples currently are taken at or near the top of the aquifer.

It is expected that low-level concentrations of PCE attributable to the latest spill will be observed in the ground water adjacent to the disposal trench for an extended period of time (perhaps for several years). As a continuation of this study, wells are being sampled routinely to monitor the

change in PCE concentration, and a number of other constituents in the ground water. A deep sampling well has been installed near the trenches to look for PCE and other dense materials in the lower zone of the unconfined aquifer.

#### ORGANICS STUDY

The Organics Study began in October 1983 and was intended to end in September 1985. The principal objectives of the original study were to identify areas of the Hanford Site where organic chemicals are present in the ground water and to determine approximate concentrations of these chemicals, with special emphasis on the 200 and 300 Areas.

Also included in this study was an equipment comparison. The capabilities of the present dedicated sampling pumps were compared to those of special portable organics sampling pumps to determine whether special pumps are needed for future organics sampling. Previous studies have indicated that the materials which contact the sample during collection and storage can affect the integrity of the sample (Pettyjohn and Hounslow 1983; Curran and Tomson 1983). The

portable organics sampling pumps purchased for this study were intended to minimize both aeration of the samples and any contact with undesirable materials.

## Methods

Pacific Northwest Laboratory and Rockwell Hanford Operations personnel chose a group of wells near the 200 Areas for sampling under this study. Wells to be sampled in other areas of the site were chosen by PNL. Because it was not known what specific organic compounds might be present in the ground water, initially it was decided to analyze samples mainly for total organic carbon (TOC), which is a general indicator of organics in ground water. Later, samples were analyzed for total organic halogen (TOX), another general indicator of ground-water contamination. The three wells (Table 10) which showed the highest TOC concentrations were later sampled for a variety of individual chemicals (Table 11).

TABLE 10. Results of TOC and TOX Analyses on Samples from Selected Hanford Site Wells

Well Number	TOC (mg/l)	TOX (mg/l)
299W-22-21	7.7	
699-31-53B	7.8	
699-32-70	5.2	
699-33-56	7.9	
699-34-51	4.2	
699-35-66	5.8	
699-35-78	10.1	
699-36-61A	4.6	
699-37-82A	4.6	
699-38-70	10.9	
699-42-40A	6.4	
699-47-46	8.8	
699-49-79	12.0	
699-49-100	7.7	
199-B3-1		0.06
199-D8-3		0.06
199-F5-6		0.05
199-H4-3		0.06
399-2-1		0.05
699-S6-E4D		0.05
699-8-17		0.05
699-26-15		0.05
699-40-1		0.05
699-74-44		0.05

During the study, two portable compressed-air-driven, piston-type pumps were purchased to minimize aeration of the samples and contact with undesirable materials. Duplicate samples were collected from four wells in the 300 Area on four different days during August 1984, using both the dedicated submersible pumps and the special organics pumps. Perchloroethylene was selected for the comparison analyses because the chosen wells in the 300 Area were known to contain perchloroethylene due to a July 1984 release to the nearby process trenches (see the section of this report titled "Accidental Discharges of Perchloroethylene"). The wells were purged with the submersible pump, and then samples were taken using both pumps.

## Results of the Area Sampling

Table 10 contains the results of preliminary TOC and TOX analyses performed on samples taken from the wells in this study. All of the TOC and TOX concentrations were below 12.0 mg/l and below 0.06 mg/l, respectively. Table 11 contains the results of the more specific analyses performed on samples from three selected wells.

The results of the TOC analyses are inconclusive, because concentrations found could easily be due to natural processes rather than actual contamination. Several wells located upgradient (to the west) of the 200 Areas showed higher concentrations of TOC than some downgradient wells. The TOX results are also inconclusive, as all the concentrations are essentially the same for all the wells tested. These wells were at scattered locations around the site, but no particular pattern could be seen in the data, possibly because all the concentrations were very low.<sup>(a)</sup>

The chemical analyses of wells 699-35-78, 699-38-70, and 699-49-79 (shown in Table 11) identified some of the specific constituents found in the ground water at these wells. Although none of the organic or inorganic chemicals are present in high concentrations, the data give an idea of those that are present and their relative concentrations. The specific conductance of water from well 699-38-70 is relatively high compared to

(a) Minimum Detection Level was 0.005 mg/l TOX.

**TABLE 11. Chemical Analyses of Ground-Water Samples from Three Selected Wells(a)**

Constituents	699-35-78	699-38-70	699-49-79	Constituents	699-35-78	699-38-70	699-49-79	
<b>Field Parameters</b>								
pH	8.20	8.15	8.19	<b>Volatile Organics</b>				
Spec. Cond. ( $\mu\text{mhos}/\text{cm}$ )	196	781	345	Carbon Tetrachloride ( $\mu\text{g/l}$ )		5.95		
<b>Anions/Cations</b>								
$\text{F}^-$ ( $\text{mg/l}$ )	0.3	0.4	0.2	Chloroform ( $\mu\text{g/l}$ )	0.33	13.56	81.90	
$\text{Cl}^-$ ( $\text{mg/l}$ )	2.3	30.0	11.0	Dichloromethane ( $\mu\text{g/l}$ )	1.15	2.94	0.29	
$\text{NO}_3^-$ ( $\text{mg/l}$ )	1.1	273.0	41.0	Trichloroethene (TCE) ( $\mu\text{g/l}$ )		0.90		
$\text{SO}_4^{2-}$ ( $\text{mg/l}$ )	11.4	39.0	48.0	Cyclohexane ( $\mu\text{g/l}$ )		0.71		
$\text{Na}^+$ ( $\text{mg/l}$ )	13.0	18.0	8.8	Methycyclohexane (MCH) ( $\mu\text{g/l}$ )	12.19	20.48		
$\text{NH}_4^+$ ( $\text{mg/l}$ )	—	—	—	Toluene ( $\mu\text{g/l}$ )		9.51		
<b>Carbon Content</b>								
Inorganic Carbon ( $\text{mg/l}$ )	19.9	28.1	23.7	2-Butoxy-Ethanol ( $\mu\text{g/l}$ )		11.33		
Total Organic Carbon ( $\text{mg/l}$ )	3.4	3.8	1.0	2-Ethyl-1-Hexanol ( $\mu\text{g/l}$ )		2.56		
Total Carbon ( $\text{mg/l}$ )	23.3	31.9	24.0	<b>Solvent Extractables</b>				
<b>Metals</b>								
Cd ( $\mu\text{g/l}$ )	10	10	10	Tri-n-butylphosphate (TBP) ( $\mu\text{g/l}$ )		3		
Cr ( $\mu\text{g/l}$ )	5	5	5	Di-n-octyladipate ( $\mu\text{g/l}$ )				
Pb ( $\mu\text{g/l}$ )	20	20	20	Bis(2-Ethylhexyl) phthalate ( $\mu\text{g/l}$ )	590			
Ag ( $\mu\text{g/l}$ )	10	10	10	Di-n-octylphthalate (DOP) ( $\mu\text{g/l}$ )	8			
Hg ( $\mu\text{g/l}$ )	0.14	0.08	0.19	Phthalates ( $\mu\text{g/l}$ )	140	10		
Ba ( $\mu\text{g/l}$ )	18	82	26	<b>Chelating Agent</b>				
Ca ( $\mu\text{g/l}$ )	17,600	88,700	41,500	Ethylenediaminetetra- acetic (EDTA) Acid ( $\mu\text{g/l}$ )		0.1	0.1	
K ( $\mu\text{g/l}$ )	2,700	6,600	3,700					
Mg ( $\mu\text{g/l}$ )	5,200	30,900	13,000					
Na ( $\mu\text{g/l}$ )	16,200	20,700	8,700					
S ( $\mu\text{g/l}$ )	3,500	13,600	15,400					
Si ( $\mu\text{g/l}$ )	17,300	24,800	21,100					
Sr ( $\mu\text{g/l}$ )	76	500	179					

(a) No entry indicates compound is below detection level.

values for waters from the other two wells, indicating higher total dissolved solids. Nitrate ion is also higher in water from this well. Well 699-35-78 showed the presence of some plasticizers, as indicated by the concentrations of di-n-octyladipate and phthalates, including di-n-octylphthalate. These compounds are associated with resins, plastics, and the manufacturing of additives for lubricating oils. Some low levels of plasticizers were also found in well 699-49-79, along with slightly higher levels of chloroform (81.90 ppb).<sup>(a)</sup>

### Results of Equipment Comparison

The results of the comparison study between the two different types of pumps are listed in Table 12. The first two columns contain analyses of samples taken with the dedicated submersible pumps and the portable organics pumps, respectively. The third column shows the arithmetic differences between the pairs of samples; a positive number indicates that the sample taken with the portable organics pump was higher in perchloroethylene than was the sample taken with the dedicated submersible pump. Conversely, a negative number indicates that the sample taken with the organics pump was lower in perchloroethylene.

A statistical comparison was performed on the data gathered in the pump comparison study, using the Student t-test to evaluate the data. The t-tests showed that higher concentrations of perchloroethylene were obtained using the portable compressed-air-driven piston-type pumps. It was estimated that the same results would be obtained, by random chance, approximately

one out of ten times that this experiment was performed under these same conditions. It is concluded that the special organic pumps may provide a more representative sample; however, more study is necessary.

**TABLE 12.** Comparison of Perchloroethylene Concentrations in Samples Collected Using Dedicated Submersible and Compressed-Air-Driven Piston-Type Pumps

Well Number	Perchloroethylene, Sample A <sup>(a)</sup> µg/l	Perchloroethylene, Sample B <sup>(b)</sup> µg/l	Difference µg/l
399-1-2	45.1	51.6	6.5
	35.1	44.3	9.2
	59.7	70.7	11.0
	51.6	57.7	6.1
399-1-3	101.8	138.7	36.9
	113.8	123.5	9.7
	112.7	106.0	-6.7
	94.5	96.5	2.0
399-2-1	52.1	37.7	-14.4
	44.9	35.3	-9.6
	46.2	46.4	0.2
	38.5	63.2	24.7
399-2-2	236.0	209.7	-26.3
	261.8	294.4	32.6
	185.8	196.3	10.5
	74.8	112.3	37.5

(a) Samples in this column were collected using the dedicated submersible pumps.

(b) Samples in this column were collected using the portable compressed-air-driven piston-type pumps.

(a) This information was taken from *Chemical Analyses of Hanford Environmental Well Water Samples*, prepared by A. P. Toste, for Environmental Evaluations Section at PNL (unpublished).

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**APPENDIX A**

**AVERAGE, MINIMUM, AND MAXIMUM  
TRITIUM AND NITRATE CONCENTRATIONS  
IN THE GROUND WATER**

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01-JAN-84 TO 31-DEC-84

WELL NO.	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)		
1-B3-1	MAX AVE MIN	2.49E+03*		7.30E+01*	1-D5-12	MAX AVE MIN	3.70E+03 3.00E+03 2.60E+03	3.70E+01*	5.50E+01*
1-B3-2P	MAX AVE MIN	2.90E+02*		2.00E+00*	1-D8-3	MAX AVE MIN	3.40E+03*	1.20E+01*	1.42E+01*
1-B3-2Q	MAX AVE MIN	1.63E+03*		1.55E+00*	1-F5-1	MAX AVE MIN	7.40E+02 2.83E+02 4.10E+01	7.30E+00*	2.27E+01*
1-B4-1	MAX AVE MIN	1.30E+05 3.43E+04 1.60E+03	5.00E+00*	1.70E+01*	1-F5-3	MAX AVE MIN	2.12E+03*	1.30E+01*	4.50E+01*
1-B4-2	MAX AVE MIN	9.60E+03 3.70E+03 1.20E+03	5.10E+00*	1.73E+01*	1-F5-4	MAX AVE MIN	1.80E+04 1.78E+04 1.70E+04	2.90E+01*	5.20E+01*
1-B4-3	MAX AVE MIN	1.90E+05 4.89E+04 1.80E+03	4.80E+00*	1.83E+01*	1-F5-6	MAX AVE MIN	1.10E+03 7.30E+02 4.40E+02	7.10E+00*	8.13E+00*
1-B4-4	MAX AVE MIN	3.90E+03*		1.90E+01*	1-F7-1	MAX AVE MIN	1.30E+03 8.95E+02 6.20E+02	2.00E+02*	1.33E+02*
1-B5-1	MAX AVE MIN	1.60E+03*		9.43E+00*	1-F8-1	MAX AVE MIN	1.10E+04 9.35E+03 8.20E+03	1.20E+02*	1.60E+02*
1-B9-1	MAX AVE MIN	2.15E+03*		2.35E+01*	1-F8-2	MAX AVE MIN	7.60E+03 6.08E+03 4.20E+03	2.90E+01*	6.93E+01*
1-D2-5	MAX AVE MIN	2.60E+03 2.30E+03 2.10E+03	8.20E+01*	1.10E+02*	1-H3-1	MAX AVE MIN	3.57E+03*	6.90E+01*	7.65E+01*

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 . 1 2 0 9 1 3

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-H4-3	MAX	8.50E+02			1-K-29	MAX	5.80E+04		
	AVE	5.20E+02	1.20E+03*	6.73E+02*		AVE	4.93E+04		
	MIN	2.90E+02				MIN	4.20E+04		
1-H4-4	MAX				1-K-30	MAX	4.70E+05		
	AVE	6.13E+02*	8.50E+01*	4.20E+02*		AVE	4.25E+05		
	MIN					MIN	3.60E+05		
1-H4-5	MAX				1-N-2	MAX			
	AVE	3.70E+02*	4.80E-01*	3.60E+01*		AVE	2.57E+04*		2.87E+01*
	MIN					MIN			
1-H4-6	MAX				1-N-3	MAX			
	AVE	2.77E+03*	1.70E+01*	2.90E+01*		AVE	3.20E+04*		
	MIN					MIN			
1-K-11	MAX	2.50E+03		5.20E+01	1-N-4	MAX			
	AVE	1.85E+03		4.33E+01		AVE	3.57E+04*		1.90E+01*
	MIN	1.40E+03		3.70E+01		MIN			
1-K-19	MAX	3.10E+04		5.40E+01	1-N-5	MAX			
	AVE	2.08E+04		4.38E+01		AVE	2.80E+04*		3.60E+01*
	MIN	1.40E+04		3.80E+01		MIN			
1-K-20	MAX	1.30E+03		3.10E+01	1-N-6	MAX			
	AVE	1.13E+03		2.38E+01		AVE	2.53E+04*		
	MIN	9.30E+02		2.00E+01		MIN			
1-K-22	MAX	1.10E+03		1.10E+01	1-N-7	MAX	2.70E+04		
	AVE	8.45E+02		8.15E+00		AVE	2.14E+04	1.70E+00*	3.17E+01*
	MIN	5.90E+02		5.70E+00		MIN	1.60E+04		
1-K-27	MAX	3.80E+03			1-N-14	MAX	5.40E+04		
	AVE	2.95E+03				AVE	3.48E+04	1.10E+01*	3.30E+01*
	MIN	2.50E+03				MIN	2.20E+04		
1-K-28	MAX	2.70E+03			1-N-15	MAX			
	AVE	2.45E+03				AVE	2.53E+04*		3.43E+01*
	MIN	2.10E+03				MIN			

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

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#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

A.2

WELL NO.	TRITIUM (PCU/L)	NITRATE (MG/L)	NITRATE (MG/L)	WELL NO.	TRITIUM (PCU/L)	NITRATE (MG/L)	NITRATE (MG/L)	
1-N-16	7.70E+03 3.50E+03	8.40E+00* 3.00E+02	1.47E+01*	1-N-26	MAX AVE MIN	1.71E+03*	2.00E+01*	1.95E+01*
1-N-17	2.10E+04 2.04E+04	9.90E-02*	1.57E+00*	1-N-27	MAX AVE MIN	2.60E+04 2.26E+04	4.50E+01*	4.23E+01*
1-N-18	3.00E+04 2.64E+04	2.00E-02*	1.33E+00*	1-N-28	MAX AVE MIN	2.70E+04 2.38E+04	2.60E+01*	3.13E+01*
1-N-19	2.60E+04 2.55E+04	3.20E+01	2.43E+01	1-N-29	MAX AVE MIN	3.20E+04 2.00E+04	4.80E+01*	4.60E+01*
1-N-20	2.70E+04 2.54E+04	1.80E+01*	3.50E+01*	1-N-30	MAX AVE MIN	3.40E+04 2.20E+04	2.20E+01*	7.27E+01*
1-N-21	1.50E+04 1.58E+04	1.50E+01*	2.50E+01*	1-N-31	MAX AVE MIN	2.80E+04 2.88E+04	3.20E+04	4.77E+01*
1-N-22	1.70E+04 1.28E+04	1.30E+01*	1.93E+01*	1-N-32	MAX AVE MIN	3.00E+04 2.40E+04	2.50E+04	5.70E+01*
1-N-23	1.90E+04 1.25E+04	1.20E+01*	2.10E+01*	1-N-33	MAX AVE MIN	3.10E+04 2.26E+04	1.65E+01*	4.20E+01
1-N-24	9.10E+03 5.30E+03	5.00B+00*	1.25B+01*	1-N-34	MAX AVE MIN	2.80E+04 2.72E+04	1.90E+01*	4.00E+01*
1-N-25	MAX AVE MIN	2.45E+03*	1.55E+01*	2-E19-1	MAX AVE MIN	4.50E+02 1.77E+02	2.40E-01*	4.20E+00*

01-JAN-84 TO 31-DEC-84

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#— PHENOL DISULFOPHIC ACID METHOD      @— SPECIFIC NITRATE ION METHOD

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED      #— PHENOL DISULFOPHIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 1 9 9 5

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
2-E23-1	MAX	8.20E+03			2-W6-1	MAX	4.10E+04		
	AVE	3.95E+03	1.30E+01*	1.63E+01*		AVE	3.88E+04	1.50E+02*	1.73E+02*
	MIN	1.90E+03				MIN	3.60E+04		
2-E24-7	MAX	5.80E+03			2-W10-5	MAX	1.60E+04		
	AVE	4.05E+03	1.60E+01*	2.20E+01*		AVE	1.45E+04	8.40E+01*	1.17E+02*
	MIN	2.60E+03				MIN	1.30E+04		
2-E25-2	MAX	1.36E+05			2-W11-9	MAX	2.00E+03		
	AVE	6.01E+04	3.92E+00*	9.73E+00*		AVE	1.78E+03	5.80E+00*	2.65E+01*
	MIN	2.85E+04				MIN	1.60E+03		
2-E26-1	MAX	9.00E+02			2-W12-1	MAX	2.20E+03		
	AVE	4.33E+02	9.60E-02*	1.18E+00*		AVE	1.95E+03	2.90E+02*	2.92E+02*
	MIN	1.80E+02				MIN	1.50E+03		
2-E26-3	MAX	2.60E+04			2-W15-2	MAX	5.10E+04		
	AVE	2.20E+04	7.30E+00*	9.63E+00*		AVE	1.33E+04	-5.00E+36*	1.15E+01*
	MIN	1.60E+04				MIN	6.30E+02		
2-E27-1	MAX	1.20E+04			2-W18-3	MAX	1.00E+03		
	AVE	9.38E+03	5.90E+00*	1.17E+01*		AVE	4.43E+02	8.40E-01*	3.20E+00*
	MIN	7.80E+03				MIN	1.40E+02		
2-E28-1	MAX	5.30E+03			2-W19-4	MAX	1.30E+03*	8.00E+00*	
	AVE	2.59E+03	1.20E+01*	7.47E+01*		AVE			
	MIN	7.50E+02				MIN			
2-E28-5	MAX	1.10E+03			2-W21-1	MAX	3.80E+05		
	AVE	5.40E+02	8.50E+00*	1.50E+01*		AVE	3.03E+05	3.30E+01*	5.30E+01*
	MIN	-1.10E+02				MIN	2.40E+05		
2-E33-14	MAX	7.10E+02			2-W22-7	MAX	4.30E+05		
	AVE	3.59E+02	2.80E+01*	3.87E+01*		AVE	3.70E+05	1.40E-01*	1.48E+00*
	MIN	-3.40E+01				MIN	3.20E+05		
2-E34-1	MAX	2.70E+04			2-W22-9	MAX	9.70E+06		
	AVE	3.16E+03	1.02E+01*	2.40E+01		AVE	8.78E+06	2.20E-01*	1.53E+00*
	MIN	3.15E+02		1.92E+01 1.40E+01		MIN	8.00E+06		

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†— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

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@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 0 9 0 6

01-JAN-84 TO 31-DEC-84

WELL NO.	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
3-1-1	MAX		4.20E+01	3-3-2	MAX		1.50E+01
	AVE		3.20E+01		AVE		1.30E+01
	MIN		1.70E+01		MIN		1.10E+01
3-1-2	MAX		3.90E+01	3-3-3	MAX		1.30E+01
	AVE		3.15E+01		AVE		1.20E+01
	MIN		1.80E+01		MIN		1.10E+01
3-1-3	MAX			3-3-6	MAX		2.00E+01
	AVE				AVE		1.85E+01
	MIN				MIN		1.70E+01
3-1-4	MAX		4.80E+01	3-3-7	MAX		2.90E+01
	AVE		3.13E+01		AVE		2.15E+01
	MIN		1.50E+01		MIN		1.80E+01
3-1-5	MAX			3-3-9	MAX		
	AVE				AVE		
	MIN				MIN		
3-1-6	MAX		3.10E+01	3-3-10	MAX		2.90E+01
	AVE		2.88E+01		AVE		2.30E+01
	MIN		2.60E+01		MIN		1.70E+01
3-2-1	MAX			3-3-11	MAX		
	AVE				AVE		
	MIN				MIN		
3-2-2	MAX		2.97E+01*	3-3-12	MAX		1.80E+01*
	AVE				AVE		2.45E+01*
	MIN				MIN		
3-2-3	MAX			3-4-1	MAX		
	AVE				AVE		
	MIN				MIN		
3-3-1	MAX			3-4-7	MAX		1.70E+01*
	AVE				AVE		3.30E+01
	MIN				MIN		2.85E+01
							2.60E+01

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@— SPECIFIC NITRATE ION METHOD

A.5

9 2 1 2 1 3 2 0 9 7 7

01-JAN-84 TO 31-DEC-84

A6

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
3-4-9	MAX AVE MIN		1.10E+01*	3.00E+01*	4-S1-8A		MAX AVE MIN	1.03E+05*	4.40E+01 3.40E+01 1.70E+01
3-4-10	MAX AVE MIN			4.00E+01 3.30E+01 2.90E+01	4-S1-8B		MAX AVE MIN		4.40E+01 3.53E+01 2.00E+01
3-5-1	MAX AVE MIN			5.90E+01 4.75E+01 3.90E+01	4-S0-7		MAX AVE MIN	3.50E+04 3.08E+04 2.20E+04	2.40E+00* 7.90E+00*
3-6-1	MAX AVE MIN			4.10E+01 3.40E+01 2.90E+01	4-S0-8		MAX AVE MIN	8.90E+04 6.88E+04 4.10E+04	6.60E+00* 2.13E+01*
3-8-1	MAX AVE MIN			1.60E+01*	6-S3-25		MAX AVE MIN	-1.30E+02 -2.05E+02 -3.80E+02	1.57E+00*
3-8-2	MAX AVE MIN			2.50E+01 1.98E+01 1.70E+01	6-S3-E12		MAX AVE MIN	2.13E+03*	1.59E+01*
3-8-3	MAX AVE MIN			1.90E+01 1.55E+01 1.40E+01	6-S6-E4B		MAX AVE MIN	1.97E+04*	2.03E+01*
3-8-4	MAX AVE MIN		1.30E+01*	2.47E+01*	6-S6-E4D		MAX AVE MIN	3.07E+04*	3.03E+01*
4-S1-7B	MAX AVE MIN	6.90E+04 6.78E+04 6.50E+04	1.70E-01*	4.07E+00*	6-S6-E14A		MAX AVE MIN	-1.53E+02*	8.43E+00*
4-S1-7C	MAX AVE MIN	9.23E+04*		4.40E+01 3.68E+01 2.10E+01	6-S7-34		MAX AVE MIN	4.30E+02 1.54E+02 -4.90E+01	5.40E-01* 2.20E+00*

#— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

\$— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

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\$— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 2 0 9 0 3

WELL NO.      TRITIUM      NITRATE<sup>a</sup>      NITRATE<sup>b</sup>      NITRATE<sup>c</sup>      NITRATE<sup>d</sup>

(PCU/L)      (MG/L)      (MG/L)      (MG/L)      (MG/L)

01-JAN-84 TO 31-DEC-84

6-S8-19	MAX AVG MIN	8.00E+01 -6.25E+01 -2.90E+02	7.70E+00	6-S28-B0	MAX AVG MIN	-3.30E+02*	1.10E+01*
6-S11E12A	MAX AVG MIN	1.95E+02*	1.01E+01*	6-S29-E12	MAX AVG MIN	2.40E+01*	
6-S11E12AP	MAX AVG MIN	6.40E+02*	1.88E+01*	6-S30E15A	MAX AVG MIN	1.80E+01*	2.00E+01*
6-S12-3	MAX AVG MIN	-5.00E+01*	1.23E+01*	6-S31-1P	MAX AVG MIN	-1.23E+02*	4.60E+00*
6-S12-29	MAX AVG MIN	1.40E+00*	2.27E+01*	6-1-18	MAX AVG MIN	7.50E+04	2.77E+01*
6-S14-20A	MAX AVG MIN	5.00E+01*	2.90E+01*	6-2-3	MAX AVG MIN	1.20E+05	5.00E+01
6-S18-51	MAX AVG MIN	3.00E-01*	8.10E+00*	6-2-33A	MAX AVG MIN	3.60E+02	4.03E+00*
6-S19-11	MAX AVG MIN	1.10E+01*	6-3-45	MAX AVG MIN	-4.00E+02*	8.90E-01*	1.73E+01*
6-S19-13	MAX AVG MIN	2.20E+01*	6-4-66	MAX AVG MIN	-5.25E+01*	1.63E+01*	
6-S27-E14	MAX AVG MIN	3.40E+01 9.20E+02*	1.12E+01*	2.93E+01	2.70E+01	1.70E+05 1.60E+05	4.07E+01*

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#— PHENOL DISULFONIC ACID METHOD

— SPECIFIC NITRATE ION METHOD

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— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 2 0 9 1 9

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-8-25	MAX	5.20E+04			6-15-26	MAX	1.20E+05		4.10E+01
	AVE	5.10E+04		2.50E+01*		AVE	1.09E+05		3.50E+01
	MIN	5.00E+04				MIN	9.40E+04		3.10E+01
6-8-32	MAX	-2.40E+02			6-17-5	MAX			
	AVE	-2.73E+02		7.53E+00*		AVE	-1.46E+02*		7.57E+01*
	MIN	-3.60E+02				MIN			
6-9-E2	MAX				6-17-70	MAX	1.70E+02		
	AVE	-1.03E+02*		5.63E+00*		AVE	1.95E+01	3.30E+01*	4.07E+01*
	MIN					MIN	-9.90E+01		
6-10-EL2	MAX				6-19-43	MAX			
	AVE	1.05E+04*		2.70E+01*		AVE	8.77E+01*		1.47E+01*
	MIN					MIN			
6-12-4B	MAX				6-19-58	MAX			
	AVE	6.70E+02*				AVE			8.23E-01*
	MIN					MIN			
6-13-64	MAX	1.00E+02			6-19-88	MAX			
	AVE	-7.53E+01	1.10E+00*	1.73E+00*		AVE		1.20E+00*	3.97E+00*
	MIN	-2.40E+02				MIN			
6-14-E6T	MAX				6-20-ESA	MAX			
	AVE	3.60E+04*	1.50E+01*	2.80E+01*		AVE	3.83E+04*		2.33E+01*
	MIN					MIN			
6-14-38	MAX				6-20-E5AP	MAX	5.60E+01		
	AVE	-1.33E+02*		5.33E+00*		AVE	-4.35E+01	2.30E-01*	7.77E-01*
	MIN					MIN	-1.20E+02		
6-14-47	MAX	1.00E+02		1.90E+00	6-20-E5AQ	MAX	1.20E+02		
	AVE	4.65E+01		1.53E+00		AVE	-1.38E+02	2.50E-01*	6.97E-01*
	MIN	-2.00E+01		1.20E+00		MIN	-3.30E+02		
6-15-15B	MAX				6-20-ESAR	MAX			
	AVE	-2.64E+02*		3.07E+01*		AVE	-2.50E+02*	2.00E+00*	
	MIN					MIN			

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#— PHENOL DISULFONIC ACID METHOD

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#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 2 0 9 1 0

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-20-E12P	MAX AVE MIN	-1.90E+02*		7.93E+00*	6-24-1T	MAX AVE MIN	9.40E+03 4.09E+03 -2.00E+02	3.80E-01*	1.41E+01*
6-20-20	MAX AVE MIN	3.33E+05*		5.80E+01*	6-24-33	MAX AVE MIN	4.03E+04*		2.70E+01*
6-20-39	MAX AVE MIN	-3.73E+02*		4.27E+00*	6-24-46	MAX AVE MIN	-7.67E+01*		5.57E+00*
6-20-82	MAX AVE MIN	2.30E+02 1.46E+02 7.20E+01	1.50E+01*	2.73E+01*	6-25-55	MAX AVE MIN	-4.67E+01*		2.17E+01*
6-21-6	MAX AVE MIN	6.90E+04 5.93E+04 5.00E+04	3.33E+01*	5.30E+01 4.02E+01 3.00E+01	6-25-70	MAX AVE MIN	1.20E+03*		2.10E+01*
6-22-70	MAX AVE MIN	2.17E+02*	8.90E+00*	1.75E+01*	6-26-15A	MAX AVE MIN	4.60E+05*	4.10E+01*	5.03E+01*
6-24-1P	MAX AVE MIN	1.20E+02 -2.05E+02 -3.30E+02	9.40E-02*	7.13E-01*	6-26-89	MAX AVE MIN			4.07E+00*
6-24-1Q	MAX AVE MIN	8.50E+01 -1.80E+02 -4.10E+02	9.40E-02*	2.92E+00*	6-27-8	MAX AVE MIN	5.63E+05*		5.63E+01*
6-24-1R	MAX AVE MIN	2.00E+02 -9.35E+01 -3.70E+02	2.30E-01*	2.26E+00*	6-28-40	MAX AVE MIN	1.30E+04 1.20E+04 1.10E+04	7.90E+00*	1.60E+01*
6-24-1S	MAX AVE MIN	3.33E+00*	1.90E-01*	4.38E+00*	6-28-40P	MAX AVE MIN	1.70E+02 -5.45E+01 -3.20E+02	1.90E-01*	7.60E-01*

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01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-28-52A	MAX AVE MIN	2.87E+01*		1.06E+00*	6-32-72	MAX AVE MIN	1.30E+05 1.23E+05 1.20E+05	2.20E+00*	5.94E+00*
6-29-4	MAX AVE MIN	1.20E+05 1.07E+05 1.00E+05	2.60E+01 2.34E+01 2.10E+01	4.10E+01 3.59E+01 3.20E+01	6-32-77	MAX AVE MIN	5.20E+03 1.47E+03 -2.30E+02	2.30E+00*	6.70E+00*
6-29-78	MAX AVE MIN	1.30E+03 6.68E+02 1.70E+02	4.10E+00*	1.10E+01*	6-33-42	MAX AVE MIN	9.00E+04*		3.07E+01*
6-31-31	MAX AVE MIN	2.10E+05 1.95E+05 1.80E+05	2.20E+01*	3.13E+01*	6-33-56	MAX AVE MIN	-1.43E+01*		1.53E+01*
6-31-31P	MAX AVE MIN	1.60E+02 -4.25E+01 -2.80E+02	7.50E-02*	9.03E-01*	6-34-39A	MAX AVE MIN	1.02E+05*		2.33E+01*
6-31-53B	MAX AVE MIN	-3.90E+02*		1.10E+01*	6-34-41B	MAX AVE MIN	1.15E+05*		2.87E+01*
6-32-22	MAX AVE MIN	5.93E+05*		5.80E+01*	6-34-42	MAX AVE MIN	1.09E+05*		3.07E+01*
6-32-43	MAX AVE MIN	3.63E+04*		2.83E+01*	6-34-51	MAX AVE MIN	1.77E+02*		1.37E+01*
6-32-62	MAX AVE MIN	2.20E+03 8.58E+02 3.20E+02	1.80E+01*	3.87E+01*	6-34-88	MAX AVE MIN	8.60E+03 2.28E+03 -1.40E+02	1.60E+01*	2.47E+01*
6-32-70B	MAX AVE MIN	3.00E+05 2.83E+05 2.70E+05	7.50E+00*	2.17E+01*	6-35-9	MAX AVE MIN	1.57E+05*	2.70E+01*	3.70E+01*

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

A.10

WELL NO.	TRITIUM (PCU)	NITRATE# (MG/L)	NITRATE# (MG/L)	WELL NO.	TRITIUM (PCU)	NITRATE# (MG/L)	NITRATE# (MG/L)	* -- 3 VALUES OR LESS, NO MAX OR MIN CALCULATED		
								MAX	AVG	MIN
6-35-66	1.20E+06	1.60B+01*	3.43E+01*	6-38-15	5.77E+05*	6.53B+01*	6.53B+01*	MIN	AVG	MAX
6-35-70	2.70E+06	2.90E+06	4.13E+01*	6-38-65	2.70E+05	2.28E+05	1.90E+02	1.60E+02	2.28E+05	1.60E+02
6-36-46P	-7.50E+00	-3.90E+02	2.30E+00*	6-38-70	2.90E+03	2.63E+03	2.60E+02*	2.53E+02*	2.60E+02*	2.53E+02*
6-36-46Q	1.53E+02*		1.84E+00*	6-39-0	2.50E+05	3.60B+01	5.80B+01	4.86B+01	3.32E+01	1.90E+01
6-36-61A	MAX	AVG	MIN	6-39-39	MAX	AVG	MIN	MAX	AVG	MIN
6-36-61B	1.80E+03	9.80E-02*	7.30E-01*	6-39-79	6.93E+02*	8.00E-01*	2.00B+00*	5.00E+02	1.98E+02*	1.80E+03
6-36-93	1.71E+03*		2.35E+01*	6-40-1	MAX	AVG	MIN	MAX	AVG	MIN
6-37-E4	2.10E+04	2.20E+01	3.60E+01	6-40-33A	5.00E-02	2.91E+01	1.21E+01	1.63E+04	1.10E+04	2.10E+04
6-37-43	MAX	AVG	MIN	6-40-62	MAX	AVG	MIN	3.70E+04	3.03E+04	2.60E+01*
6-37-82A	8.00E+03	2.53E+03	2.90E+01*	6-41-1	MAX	AVG	MIN	2.50E+05	3.80E+01	5.50E+01

01-JAN-84 TO 31-DEC-84

9 2 1 2 3 9 2 1 9 1 2

\* -- 3 VALUES OR LESS, NO MAX OR MIN CALCULATED  
 # -- PHENOL DISULFONIC ACID METHOD  
 \$ -- PHENOL DISULFONIC ACID METHOD  
 @ -- SPECIFIC NITRATE ION METHOD

\* -- 3 VALUES OR LESS, NO MAX OR MIN CALCULATED  
 # -- PHENOL DISULFONIC ACID METHOD  
 \$ -- PHENOL DISULFONIC ACID METHOD  
 @ -- SPECIFIC NITRATE ION METHOD

9 2 1 2 1 2 2 7 9 1 3

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-41-23	MAX AVE MIN	3.50E+05*		3.77E+01*	6-46-4	MAX AVE MIN	2.20E+05 1.85E+05 1.40E+05	2.70E+01 2.50E+01 2.20E+01	4.50E+01 3.67E+01 3.10E+01
6-42-2	MAX AVE MIN	2.20E+05 2.06E+05 1.50E+05	3.40E+01 2.92E+01 2.30E+01	5.40E+01 4.59E+01 3.90E+01	6-46-21B	MAX AVE MIN	3.73E+04*		2.13E+01*
6-42-12A	MAX AVE MIN	3.27E+05*	3.70E+01*	5.33E+01*	6-47-5	MAX AVE MIN	1.60E+05 1.15E+05 6.50E+04	1.50E+01 1.36E+01 1.20E+01	3.60E+01 2.80E+01 1.70E+01
6-43-3	MAX AVE MIN	2.40E+05 2.13E+05 1.90E+05	3.10E+01 2.92E+01 2.70E+01	5.60E+01 4.44E+01 3.50E+01	6-47-35A	MAX AVE MIN	3.40E+02 1.37E+02 -8.20E+01	5.40E+00*	1.20E+01*
6-43-88	MAX AVE MIN	3.60E+02 5.71E+01 -2.90E+02	2.10E+00*	1.70E+01*	6-47-46A	MAX AVE MIN	7.20E+02 2.05E+02 -2.40E+02		3.00E+01 2.18E+01 1.70E+01
6-44-4	MAX AVE MIN	1.30E+05 1.07E+05 9.50E+04	1.50E+01 6.40E+00 4.80E-01	2.60E+01 6.81E+00 8.80E-01	6-47-60	MAX AVE MIN	8.00E+02 8.20E+01 -3.00E+02	2.00E+01*	2.60E+01*
6-44-64	MAX AVE MIN	1.00E+03 2.43E+02 -1.20E+02	3.40E+01*	4.33E+01*	6-48-7	MAX AVE MIN	-2.10E+02*		7.30E+00*
6-45-2	MAX AVE MIN	2.00E+05 1.72E+05 1.40E+05	2.45E+01*	4.90E+01 4.17E+01 3.30E+01	6-48-18	MAX AVE MIN	4.30E+02*		1.01E+01*
6-45-42	MAX AVE MIN	6.70E+04 6.34E+04 5.60E+04	3.10E+00*	9.80E+00 8.25E+00 6.80E+00	6-48-71	MAX AVE MIN	7.80E+02 7.50E+01 -4.10E+02	2.20E+01*	2.87E+01*
6-45-69A	MAX AVE MIN	3.40E+02 1.64E+02 -2.80E+01		4.70E+01 3.60E+01 2.80E+01	6-49-13E	MAX AVE MIN	-7.43E+01*		9.13E+00*

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

A.12

9 2 1 2 1 3 2 0 9 1 4

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-49-28	MAX	1.60E+03			6-51-75	MAX	1.00E+03		
	AVE	3.55E+02	2.00E-02*	1.16E+00*		AVE	2.33E+02	2.00E+00*	8.80E+00*
	MIN	-4.40E+02				MIN	-2.80E+02		
6-49-55A	MAX	4.50E+03			6-52-19	MAX			7.65E+00*
	AVE	2.58E+03	4.30E+00*	6.67E+01*		AVE			
	MIN	1.40E+01				MIN			
6-49-57	MAX	2.10E+04			6-53-35	MAX	6.40E+02		
	AVE	1.95E+04	1.90E+02*	2.27E+02*		AVE	1.74E+02	2.00E-01*	9.13E-01*
	MIN	1.80E+04				MIN	-2.70E+02		
6-49-79	MAX	5.40E+02			6-53-103	MAX			
	AVE	4.13E+01	3.60E+01*	5.20E+01*		AVE	8.08E+01*		1.43E+00*
	MIN	-2.10E+02				MIN			
6-50-28B	MAX	8.70E+02			6-54-34	MAX	5.30E+02		
	AVE	4.58E+02	1.80E+00*	7.17E+00*		AVE	1.00E+01	2.40E-01*	8.47E+00*
	MIN	1.10E+01				MIN	-3.80E+02		
6-50-30	MAX	8.10E+02			6-54-37A	MAX	1.20E+03		
	AVE	1.78E+02	3.60E+00*	3.87E+00*		AVE	3.68E+02	9.80E-03*	2.60E+00*
	MIN	-4.00E+02				MIN	-3.20E+02		
6-50-42	MAX	2.90E+03			6-54-42	MAX			
	AVE	2.23E+03	5.60E-01*	2.87E+00*		AVE	-3.50E+01*	4.00E-01*	1.50E+00*
	MIN	1.80E+03				MIN			
6-50-53	MAX	6.10E+02			6-54-45A	MAX			
	AVE	2.13E+02	2.20E+01*	3.10E+01*		AVE	-6.33E+01*	1.50E+00*	5.80E+01*
	MIN	-5.70E+01				MIN			
6-50-85	MAX	1.00E+03			6-55-40	MAX	3.70E+02		
	AVE	2.54E+02	2.70E+01*	3.23E+01*		AVE	-5.50E+01	2.40E-01*	1.10E+00*
	MIN	-5.50E+01				MIN	-4.50E+02		
6-51-63	MAX	6.90E+02			6-55-44	MAX	3.40E+02		
	AVE	-5.00E+00	5.90E+00*	1.50E+01*		AVE	-9.45E+01	9.80E-03*	2.50E-01*
	MIN	-3.50E+02				MIN	-3.50E+02		

#--- 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

\*--- PHENOL DISULFONIC ACID METHOD

@--- SPECIFIC NITRATE ION METHOD

#--- 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

\*--- PHENOL DISULFONIC ACID METHOD

@--- SPECIFIC NITRATE ION METHOD

9 2 1 2 3 2 1 9 1 5

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-55-50A	MAX AVE MIN	9.80E+02 2.75E+02 -1.70E+02	2.60E-01*	2.03E+00*	6-58-24	MAX AVE MIN	2.90E+03 6.97E+02 -4.00E+02	1.70E+00*	6.43E+00*
6-55-50C	MAX AVE MIN	5.80E+02 7.75E+01 -4.10E+02	2.87E+00*	3.85E+00*	6-59-32	MAX AVE MIN	1.40E+03 8.75E+02 1.10E+02	1.90E+00*	7.43E+00*
6-55-50D	MAX AVE MIN	2.41E+02*	9.80E-01*	5.40E+00*	6-59-58	MAX AVE MIN	1.40E+03 1.13E+03 9.20E+02	8.30E-01*	2.13E+00*
6-55-70	MAX AVE MIN	5.00E+02 -8.18E+01 -3.80E+02	2.00E-02*	7.93E-01*	6-59-80B	MAX AVE MIN		3.30E-01*	1.36E+00*
6-55-76	MAX AVE MIN		1.80E-01*	1.20E+01*	6-60-32	MAX AVE MIN	1.50E+03 1.04E+03 4.50E+02	2.40E+00*	8.23E+00*
6-55-89	MAX AVE MIN		2.10E+00*	6.47E+00*	6-60-57	MAX AVE MIN	7.87E+02*	2.80E-01*	1.90E+00*
6-56-43	MAX AVE MIN	5.30E+02 1.55E+02 -2.20E+02	9.80E-02*	1.61E+00*	6-60-60	MAX AVE MIN	8.30E+03 6.15E+03 2.40E+03	1.60E+00*	3.83E+00*
6-57-25A	MAX AVE MIN	5.40E+02 6.93E+01 -1.40E+02	1.60E+00*	9.07E+00*	6-61-37	MAX AVE MIN	-3.10E+02*	1.80E+00*	7.03E+00*
6-57-29A	MAX AVE MIN	9.10E+02 6.48E+02 2.80E+02	9.40E-01*	5.40E+00*	6-61-41	MAX AVE MIN	3.00E+02*	1.30E+00*	5.40E+00*
6-57-83	MAX AVE MIN			9.20E+00 6.30E+00 4.80E+00	6-61-62	MAX AVE MIN	9.20E+03 8.63E+03 7.90E+03	1.10E+01*	2.37E+01*

#— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

@— PHENOL DISULFONIC ACID METHOD

— SPECIFIC NITRATE ION METHOD

#— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

@— PHENOL DISULFONIC ACID METHOD

— SPECIFIC NITRATE ION METHOD

A.14

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01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-61-66	MAX AVE MIN	1.10E+03 4.46E+02 -2.80E+02	2.40E+00*	7.37E+00*	6-65-23	MAX AVE MIN	-1.10E+02*		1.10E+00*
6-62-31	MAX AVE MIN	4.50E+02*	3.60E+00*	1.38E+01*	6-65-50	MAX AVE MIN	1.40E+03 9.35E+02 1.40E+02	9.20E-01*	3.63E+00*
6-62-43F	MAX AVE MIN	1.70E+03 9.93E+02 4.70E+02	1.70E+00*	5.47E+00*	6-65-59	MAX AVE MIN	9.90E+02 8.63E+02 7.30E+02		3.10E+00 2.17E+00 1.40E+00
6-63-25A	MAX AVE MIN	4.30E+02 -1.25E+01 -3.60E+02	1.20E+01*	2.60E+01*	6-65-72	MAX AVE MIN	6.50E+03 3.65E+03 2.50E+03		2.30E+01 1.93E+01 1.50E+01
6-63-51	MAX AVE MIN	9.40E+02*		1.20E+01*	6-65-83	MAX AVE MIN	4.50E+03 2.18E+03 1.10E+03		1.10E+01 7.43E+00 5.50E+00
6-63-55	MAX AVE MIN	1.40E+03 9.93E+02 7.10E+02	2.50E-01*	2.60E+00*	6-66-23	MAX AVE MIN		1.70E+01*	4.27E+01*
6-63-58	MAX AVE MIN	8.10E+02 5.83E+02 4.20E+02		2.40E+01 1.34E+01 8.40E+00	6-66-38	MAX AVE MIN		2.50E-01*	2.47E+00*
6-63-90	MAX AVE MIN	2.80E+03 6.27E+02 -1.10E+02		1.30E+01 1.01E+01 7.90E+00	6-66-39	MAX AVE MIN		9.70E-03*	2.25E+00*
6-64-27	MAX AVE MIN	1.30E+02*	1.60E+01*	4.37E+01*	6-66-58	MAX AVE MIN	7.60E+02 6.40E+02 4.70E+02	5.80E-01*	2.83E+00*
6-64-62	MAX AVE MIN	1.00E+04 6.25E+03 1.70E+03		2.40E+01 1.78E+01 1.10E+01	6-66-64	MAX AVE MIN	7.90E+03 5.43E+03 2.40E+03		1.90E+01 1.70E+01 1.40E+01

#— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

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9 2 1 2 1 2 3 9 1 7

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-66-103	MAX AVE MIN	6.60E+02*		8.40E-01*	6-72-73	MAX AVE MIN	1.55E+03*		4.60E+00*
6-67-51	MAX AVE MIN	2.00E+03 1.20E+03 8.50E+02	7.20E-01*	3.10E+00*	6-72-88	MAX AVE MIN	7.10E+03 4.13E+03 2.10E+03		1.70E+01 1.13E+01 5.60E+00
6-67-86	MAX AVE MIN	3.80E+03 1.40E+03 -4.90E+02		8.70E+00 5.95E+00 4.60E+00	6-72-92	MAX AVE MIN	2.65E+03*		8.60E+00*
6-67-98	MAX AVE MIN	4.70E+01 -2.38E+02 -4.90E+02		1.20E+01 9.05E+00 6.70E+00	6-72-98	MAX AVE MIN	1.00E+03*		2.20E+00*
6-68-105	MAX AVE MIN	5.00E+02*		3.70E+00*	6-73-61	MAX AVE MIN	6.50E+02 2.86E+02 9.20E+01	4.60E+00*	1.07E+01*
6-69-38	MAX AVE MIN	8.50E+02 4.54E+02 -8.60E+01	3.90E-01*	3.73E+00*	6-74-44	MAX AVE MIN	4.60E+02 1.85E+02 -1.60E+02	9.70E-02*	3.83E+00*
6-70-68	MAX AVE MIN	1.55E+03*		3.60E+00*	6-77-36	MAX AVE MIN	5.50E+02 9.60E+01 -3.50E+02	8.40E+01*	1.08E+02*
6-71-30	MAX AVE MIN	-8.75E+01*		2.80E+01*	6-77-54	MAX AVE MIN		4.50E+00*	1.07E+01*
6-71-52	MAX AVE MIN	1.40E+03 1.25E+03 1.10E+03	3.40E+00*	9.33E+00*	6-78-62	MAX AVE MIN			9.35E+00*
6-71-77	MAX AVE MIN	5.05E+03*		1.08E+01*	6-80-43P	MAX AVE MIN			1.60E+00*

#— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

A.16

9 2 1 2 3 9 2 0 9 1 3

01-JAN-84 TO 31-DEC-84

WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO.		TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-80-43Q	MAX AVE MIN			1.86E+00*	6-97-43	MAX AVE MIN	6.94E+05 1.17E+05 1.10E+04	1.17E+02 2.71E+01 7.75E+00	1.90E+01*
6-80-43R	MAX AVE MIN			1.52E+00*	6-97-51A	MAX AVE MIN	1.80E+04 1.40E+04 1.20E+04	7.60E+00* 2.03E+01*	
6-80-43S	MAX AVE MIN			1.09E+01*	6-101-48B	MAX AVE MIN	1.76E+03*		2.35E+00*
6-81-58	MAX AVE MIN	2.20E+03 3.87E+02 -3.80E+02	1.20E+00*	4.00E+00*					*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED
6-83-47	MAX AVE MIN	9.40E+02*							#— PHENOL DISULFONIC ACID METHOD
6-84-35AO	MAX AVE MIN	9.10E+02*		1.80E+00*					@— SPECIFIC NITRATE ION METHOD
6-87-55	MAX AVE MIN	1.20E+05 1.03E+05 8.30E+04	8.90E+00*	1.70E+01*					
6-89-35	MAX AVE MIN		4.80E+00*	1.27E+01*					
6-90-45	MAX AVE MIN	8.10E+03 2.35E+03 -5.67E+01	2.58E+01 7.36E+00 1.15E-01	7.80E+00*					
6-96-49	MAX AVE MIN	3.10E+04 2.26E+04 1.80E+04	1.65E+01*	4.20E+01 3.18E+01 2.40E+01					

\*— 3 VALUES OR LESS, NO MAX OR MIN CALCULATED

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

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## **APPENDIX B.1**

**GROSS ALPHA, STRONTIUM-90, CESIUM-137,  
COBALT-60, URANIUM, RUTHENIUM-106, CHROMIUM,  
AND FLUORIDE CONCENTRATIONS IN THE GROUND WATER**

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01-JAN-84 TO 31-DEC-84

PAGE 1

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
1-B4-4 22-MAY-84 +/-error:				-2.80E+00 3.30E+00				
19-DEC-84 +/-error:				-9.30E-01 4.50E+00				
1-D5-12 23-FEB-84 +/-error:				1.40E+01 4.40E+00				
23-MAY-84 +/-error:				-8.90E-01 3.30E+00				
20-SEP-84 +/-error:				-1.40E+00 3.20E+00				
30-NOV-84 +/-error:				-2.50E+00 6.90E+00				
1-H4-3 22-FEB-84 +/-error:			6.80E+00 3.20E+00	1.10E+02		3.10E+00	3.20E-01	
23-MAY-84 +/-error:			-8.80E-01 3.30E+00	1.20E+02		2.80E+00	1.30E-01	
19-SEP-84 +/-error:			-1.50E-01 3.20E+00	1.20E+02		1.10E+00	1.50E-01	
06-DEC-84 +/-error:			-3.20E+00 7.50E+00	7.10E+01		5.60E-01	2.80E-01	
1-H4-4 22-FEB-84 +/-error:			4.10E+00 3.10E+00	1.50E+01		9.30E-01	3.30E-01	

B.1.1

9 2 1 2 1 3 2 0 9 2 1

01-JAN-84 TO 31-DEC-84

PAGE 2

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
1-H4-4 23-MAY-84 +/-error:				-1.30E+00 3.30E+00	1.60E+01		1.10E+00	9.50E-02
19-SEP-84 +/-error:				8.90E-01 3.20E+00	2.60E+01		7.10E-01	9.90E-02
31-DEC-84 +/-error:				-4.20E-01 3.30E+00			1.60E-03	3.20E-01
1-H4-5 22-FEB-84 +/-error:				3.40E+00 3.10E+00	< 6.70E+00*		8.90E-03	2.60E-01
23-MAY-84 +/-error:				-2.00E+00 3.30E+00	< 6.70E+00*		4.40E-01	9.50E-02
19-SEP-84 +/-error:				2.90E+00 3.20E+00	< 6.70E+00*		4.10E-01	2.50E-03
1-H4-6 22-FEB-84 +/-error:				8.20E+00 3.20E+00	< 6.70E+00*		2.10E-01	3.80E-01
23-MAY-84 +/-error:				-6.20E-01 3.30E+00	< 6.70E+00*		9.20E-02	1.90E-01
19-SEP-84 +/-error:				6.70E+00 3.30E+00	< 6.70E+00*		4.80E-02	9.90E-02
1-K-11 23-MAY-84 +/-error:				1.30E+00 3.40E+00				
28-NOV-84 +/-error:				-2.20E+00 5.60E+00				

Reported as "less than" values. (Actual values will be reported in 1985.)

B.1.2

9 2 1 2 6 3 2 0 9 2 2

01-JAN-84 TO 31-DEC-84

PAGE 3

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
1-K-27 02-MAR-84 +/-error:				-2.80E+00 3.20E+00		6.50E+01 2.20E+01		
29-MAY-84 +/-error:			2.40E+02	-4.20E+00 3.30E+00				
27-AUG-84 +/-error:				3.30E+00 3.60E+00				
28-NOV-84 +/-error:				-2.70E+00 6.30E+00				
1-K-28 02-MAR-84 +/-error:				-5.70E-01 3.20E+00				
29-MAY-84 +/-error:				-3.20E+00 3.30E+00				
27-AUG-84 +/-error:				3.40E+00 3.30E+00				
28-NOV-84 +/-error:				-2.10E+00 5.50E+00				
1-K-29 02-MAR-84 +/-error:				-1.30E+00 3.10E+00		6.10E+01 2.10E+01		
29-MAY-84 +/-error:				7.10E-02 3.20E+00				
27-AUG-84 +/-error:				-3.90E+00 3.20E+00				
28-NOV-84 +/-error:				-3.10E+00 8.90E+00				

9 2 1 2 1 3 2 0 9 1 3

01-JAN-84 TO 31-DEC-84

PAGE 4

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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1-K-30  
 02-MAR-84  
 +/-error:  
 -4.20E+00  
 3.10E+00

29-MAY-84  
 +/-error:  
 2.70E+00  
 3.20E+00

27-AUG-84  
 +/-error:  
 1.80E-01  
 3.20E+00

28-NOV-84  
 +/-error:  
 1.10E+01  
 4.30E+00

B.1.4

1-N-2  
 06-MAR-84  
 +/-error:  
 2.80E+01  
 4.50E+00  
 3.10E+02  
 3.10E+01

30-MAY-84  
 +/-error:  
 3.60E+03  
 6.80E+01  
 3.80E+02  
 4.70E+01

29-AUG-84  
 +/-error:  
 6.20E+01  
 8.90E+00  
 4.90E+02  
 6.20E+01

1-N-3  
 06-MAR-84  
 +/-error:  
 1.50E+01  
 3.40E+00  
 1.30E+02  
 2.20E+01

29-AUG-84  
 +/-error:  
 2.60E+01  
 3.50E+00  
 1.60E+02  
 2.30E+01

1-N-4  
 06-MAR-84  
 +/-error:  
 2.00E+01  
 3.30E+00

30-MAY-84  
 +/-error:  
 1.10E+01  
 3.20E+00  
 1.90E+01  
 3.40E+00

01-JAN-84 TO 31-DEC-84

PAGE 5

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
1-N-4 29-AUG-84 +/-error:				2.80E+01 3.60E+00				
1-N-5 02-MAR-84 +/-error:				7.50E+00 3.20E+00		7.20E+01 2.10E+01		
31-MAY-84 +/-error:	9.10E+01 7.10E+00			1.80E+01 3.40E+00		6.90E+01 2.20E+01		
29-AUG-84 +/-error:				1.70E+01 3.50E+00		5.00E+01 2.10E+01		
1-N-6 06-MAR-84 +/-error:				4.90E+01		1.80E+02 2.30E+01		
30-MAY-84 +/-error:	1.03E+00 8.01E+00			6.60E+01 4.70E+00		2.10E+02 3.00E+01		
29-AUG-84 +/-error:				4.60E+01 3.80E+00		1.20E+02 2.30E+01		
1-N-7 01-MAR-84 +/-error:				1.70E+01 3.30E+00		8.80E+01 2.20E+01		
29-MAY-84 +/-error:	5.70E+00 1.90E+00			5.10E+01 3.80E+00		1.00E+02 2.30E+01		
30-AUG-84 +/-error:				4.10E+01 3.60E+00		9.70E+01 2.30E+01		
20-DEC-84 +/-error:	1.16E+01 2.85E+00			4.20E+01 4.50E+00		9.30E+01 2.70E+01		

01-JAN-84 TO 31-DEC-84

PAGE 6

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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1-N-14

01-MAR-84			4.10E+01		8.70E+01		
+/-error:			3.50E+00		2.20E+01		
29-MAY-84		3.10E+02		5.30E+01		1.40E+02	
+/-error:		1.25E+01		3.90E+00		2.40E+01	
30-AUG-84				6.10E+01		2.10E+02	
+/-error:				3.90E+00		2.40E+01	
20-DEC-84		4.96E+02		7.00E+01		2.60E+02	
+/-error:		1.83E+01		5.00E+00		3.00E+01	

1-N-15

06-MAR-84			2.30E+01		6.40E+01		
+/-error:			3.30E+00		2.20E+01		
30-MAY-84		5.50E+00		4.30E+01		7.40E+01	
+/-error:		1.90E+00		3.60E+00		2.20E+01	
29-AUG-84				4.80E+01		8.20E+01	
+/-error:				3.80E+00		2.20E+01	

1-N-16

01-MAR-84			1.30E+01				
+/-error:			3.10E+00				
30-MAY-84		6.60E-01		4.30E+00			
+/-error:		1.30E+00		3.20E+00			
28-AUG-84				3.00E+00			
+/-error:				3.20E+00			
21-DEC-84		1.10E-01		-7.80E-01			
+/-error:		1.30E+00		3.30E+00			

1-N-17

01-MAR-84			3.40E+00				
+/-error:			3.50E+00				

9 2 1 2 3 8 2 3 9 2 6

01-JAN-84 TO 31-DEC-84

PAGE 7

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
1-N-17								
31-MAY-84	1.70E+01		2.10E+00					
+/-error:	2.85E+00		3.30E+00					
29-AUG-84			-6.00E-01					
+/-error:			3.30E+00					
20-DEC-84	3.06E+01		-4.50E-01					
+/-error:	3.99E+00		3.40E+00					
1-N-18								
01-MAR-84			4.90E+00					
+/-error:			3.50E+00					
31-MAY-84	5.10E+01		2.60E-01					
+/-error:	6.93E+00		3.30E+00					
29-AUG-84			3.40E+00					
+/-error:			3.30E+00					
20-DEC-84	6.77E+01		8.30E+00					
+/-error:	5.58E+00		3.20E+00					
1-N-19								
02-MAR-84			1.70E+01		6.50E+01			
+/-error:			3.30E+00		2.10E+01			
31-MAY-84	4.00E+01		1.10E+01					
+/-error:	6.24E+00		3.40E+00					
29-AUG-84			2.60E+01		9.00E+01			
+/-error:			3.40E+00		2.10E+01			
20-DEC-84	5.78E+01		2.00E+01					
+/-error:	5.10E+00		3.30E+00					
1-N-20								
01-MAR-84			1.20E+01		4.70E+01			
+/-error:			3.20E+00		2.10E+01			

B.17

9 2 1 2 . 1 2 ) 9 7 7

01-JAN-84 TO 31-DEC-84

PAGE 8

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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1-N-20  
 31-MAY-84                    3.70E+01                    1.60E+01  
 +/-error:                    4.00E+00                    3.40E+00

29-AUG-84                                                     2.20E+01  
 +/-error:                                                     3.40E+00

20-DEC-84                    3.95E+01                    4.10E+01  
 +/-error:                    4.33E+00                    3.50E+00

1-N-21  
 01-MAR-84                                                     1.40E+00  
 +/-error:                                                     3.20E+00

30-MAY-84                    1.40E+00                    9.00E+00  
 +/-error:                    1.30E+00                    3.30E+00

28-AUG-84                                                     3.70E+00  
 +/-error:                                                     3.30E+00

21-DEC-84                    1.90E+00                    1.40E+01  
 +/-error:                    1.60E+00                    3.30E+00

1-N-22  
 01-MAR-84                                                     1.40E+00  
 +/-error:                                                     3.10E+00

30-MAY-84                    1.40E+00                    4.90E+00  
 +/-error:                    1.40E+00                    3.20E+00

28-AUG-84                                                     5.10E+00  
 +/-error:                                                     3.30E+00

21-DEC-84                    1.10E+01                    1.10E+01  
 +/-error:                    2.50E+00                    3.30E+00

1-N-23  
 01-MAR-84                                                     4.80E+00  
 +/-error:                                                     3.20E+00

01-JAN-84 TO 31-DEC-84

PAGE 9

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
<b>1-N-23</b>								
30-MAY-84		3.30E+01		1.80E+00				
+/-error:		3.91E+00		3.30E+00				
28-AUG-84				5.50E+00				
+/-error:				3.30E+00				
21-DEC-84		1.10E+01		7.20E+00				
+/-error:		2.50E+00		3.20E+00				
<b>1-N-24</b>								
01-MAR-84				1.30E+00				
+/-error:				3.10E+00				
30-MAY-84		2.70E+01		9.80E+00				
+/-error:		3.53E+00		3.40E+00				
28-AUG-84				6.40E+00				
+/-error:				3.30E+00				
<b>1-N-25</b>								
28-AUG-84				3.60E+00				
+/-error:				3.30E+00				
21-DEC-84		-1.60E+00		1.60E+00				
+/-error:		9.10E-01		3.30E+00				
<b>1-N-26</b>								
01-MAR-84				4.10E-01				
+/-error:				3.10E+00				
30-MAY-84		1.50E+01		1.00E+00				
+/-error:		2.72E+00		3.30E+00				
28-AUG-84				2.80E+00				
+/-error:				3.30E+00				

9 2 1 2 - 3 2 3 9 2 9

01-JAN-84 TO 31-DEC-84

PAGE 10

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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1-N-27

01-MAR-84

+/-error:

1.40E+02

3.10E+02

4.70E+01

29-MAY-84

+/-error:

5.10E-01

1.20E+00

8.70E+01

9.40E+00

4.80E+02

6.30E+01

30-AUG-84

+/-error:

1.20E+02

4.20E+02

4.40E+01

20-DEC-84

+/-error:

-7.40E-01

1.70E+00

1.10E+02

6.00E+00

2.80E+02

3.70E+01

B.1.10

1-N-28

01-MAR-84

+/-error:

8.50E+01

2.00E+02

5.20E+00

29-MAY-84

+/-error:

4.10E+00

1.70E+00

9.70E+01

9.80E+00

5.00E+02

6.50E+01

30-AUG-84

+/-error:

1.30E+02

4.60E+02

5.00E+01

20-DEC-84

+/-error:

-1.00E-02

1.40E+00

1.60E+02

8.10E+00

4.30E+02

5.00E+01

1-N-29

01-MAR-84

+/-error:

1.50E+02

3.10E+02

6.20E+01

29-MAY-84

+/-error:

2.60E+00

1.50E+00

9.50E+01

1.20E+01

5.30E+02

8.00E+01

30-AUG-84

+/-error:

1.60E+02

2.00E+01

4.50E+02

4.70E+01

20-DEC-84

+/-error:

1.58E+01

3.18E+00

1.40E+02

7.00E+00

3.50E+02

4.30E+01

01-JAN-84 TO 31-DEC-84

PAGE 11

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
<b>1-N-30</b>								
01-MAR-84				5.20E+01		1.80E+02		
+/-error:						2.80E+01		
29-MAY-84		3.20E+00		9.00E+01		1.70E+02		
+/-error:		1.60E+00		4.00E+00		2.40E+01		
30-AUG-84				1.20E+02		3.00E+02		
+/-error:						3.30E+01		
20-DEC-84		1.20E+00		1.00E+02		1.50E+02		
+/-error:		2.00E+00		4.60E+00		2.70E+01		
<b>1-N-31</b>								
01-MAR-84				6.80E+01		1.40E+02		
+/-error:						3.10E+01		
29-MAY-84		8.50E+01		9.90E+01		4.50E+02		
+/-error:		1.00E+01		8.70E+00		5.70E+01		
30-AUG-84				1.10E+02		3.00E+02		
+/-error:						3.20E+01		
20-DEC-84		8.30E+01		6.90E+01		1.20E+02		
+/-error:		9.27E+00		3.80E+00		2.30E+01		
<b>1-N-32</b>								
01-MAR-84				7.30E+01		1.80E+02		
+/-error:						2.30E+01		
29-MAY-84		1.90E+00		9.40E+01		3.00E+02		
+/-error:		1.30E+00		6.40E+00		4.00E+01		
30-AUG-84				1.20E+02		2.80E+02		
+/-error:						2.60E+01		
20-DEC-84		2.90E+00		1.20E+02		2.10E+02		
+/-error:		1.80E+00		5.30E+00		3.10E+01		

9 2 1 2 3 2 1 9 3 1

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PAGE 12

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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1-N-33

01-MAR-84 +/-error:			4.50E+01		1.70E+02		
					2.30E+01		
29-MAY-84 +/-error:	1.59E+03	3.10E+01	5.30E+01 4.60E+00		2.30E+02 2.90E+01		
30-AUG-84 +/-error:			6.50E+01 7.00E+00		2.90E+02 4.50E+01		
20-DEC-84 +/-error:	1.83E+03	3.94E+01	9.10E+01 6.10E+00		2.90E+02 3.80E+01		

1-N-34

01-MAR-84 +/-error:	3.70E-01	1.10E+00	4.80E+01		1.30E+02		
					2.30E+01		
29-MAY-84 +/-error:	5.40E+01	8.30E+00	7.80E+01 7.70E+00		3.90E+02 5.10E+01		
30-AUG-84 +/-error:	3.20E+01	2.80E+00	6.40E+01 3.80E+00		1.00E+02 2.30E+01		
20-DEC-84 +/-error:	3.10E+01	7.70E+00	4.40E+01 3.70E+00		8.50E+01 2.30E+01		

2-E19-1

03-FEB-84 +/-error:			6.30E+00				
			3.30E+00				
24-APR-84 +/-error:			-8.40E-01				
			3.20E+00				
09-JUL-84 +/-error:			5.70E+00				
			3.20E+00				
24-OCT-84 +/-error:			-1.00E+00				
			4.30E+00				

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PAGE 13

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
2-E23-1 03-FEB-84 +/-error:				1.30E+00 3.30E+00				
24-APR-84 +/-error:				-2.60E+00 3.20E+00				
02-JUL-84 +/-error:				1.10E+00 3.20E+00				
24-OCT-84 +/-error:				3.10E+01 6.10E+00				
2-E24-7 03-FEB-84 +/-error:				2.00E+00 3.30E+00				
24-APR-84 +/-error:				-3.10E-01 3.20E+00				
05-JUL-84 +/-error:				6.20E+00 3.20E+00				
24-OCT-84 +/-error:				1.30E+00 3.30E+00				
2-E25-2 07-FEB-84 +/-error:				-1.80E+00 3.10E+00				
03-MAY-84 +/-error:				2.00E+00 3.30E+00				
06-JUL-84 +/-error:				-4.60E-01 3.30E+00				
24-OCT-84 +/-error:				-1.20E+00 3.30E+00				

9 2 1 2 3 2 1 9 3 3

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PAGE 14

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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2-E26-3  
 07-FEB-84  
 +/-error:  
 -5.60E-01  
 3.10E+00

03-MAY-84  
 +/-error:  
 -1.90E+00  
 3.20E+00

06-JUL-84  
 +/-error:  
 -1.50E+00  
 3.30E+00

24-OCT-84  
 +/-error:  
 1.40E+00  
 5.60E+00

2-E27-1  
 03-FEB-84  
 +/-error:  
 5.20E+00  
 3.30E+00

24-APR-84  
 +/-error:  
 -5.40E-01  
 3.20E+00

05-JUL-84  
 +/-error:  
 -4.10E+00  
 3.20E+00

24-OCT-84  
 +/-error:  
 3.90E+00  
 5.70E+00

2-E28-1  
 03-FEB-84  
 +/-error:  
 -1.30E+00  
 3.30E+00

02-MAY-84  
 +/-error:  
 -5.10E-01  
 3.20E+00

02-JUL-84  
 +/-error:  
 6.30E+00  
 3.30E+00

24-OCT-84  
 +/-error:  
 -1.60E+00  
 3.30E+00

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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2-E28-5  
 03-FEB-84  
 +/-error:  
 5.90E+00  
 3.20E+00

03-MAY-84  
 +/-error:  
 -1.40E+00  
 3.20E+00

02-JUL-84  
 +/-error:  
 -7.50E-01  
 3.10E+00

24-OCT-84  
 +/-error:  
 8.80E+00  
 4.10E+00

2-E33-14  
 03-FEB-84  
 +/-error:  
 4.40E+00  
 3.30E+00

03-MAY-84  
 +/-error:  
 2.00E+00  
 3.30E+00

05-JUL-84  
 +/-error:  
 5.70E+00  
 3.30E+00

24-OCT-84  
 +/-error:  
 -4.50E+00  
 3.30E+00

2-W6-1  
 30-JAN-84  
 +/-error:  
 1.60E+01  
 3.40E+00

27-APR-84  
 +/-error:  
 1.60E+00  
 3.30E+00

09-JUL-84  
 +/-error:  
 -3.30E+00  
 3.20E+00

25-OCT-84  
 +/-error:  
 -1.80E+00  
 7.10E+00

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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2-WL0-5		
30-JAN-84	4.30E+00	
+/-error:	3.20E+00	
27-APR-84	-5.10E-01	
+/-error:	3.30E+00	
09-JUL-84	6.00E+00	
+/-error:	3.30E+00	
25-OCT-84	-1.80E+00	
+/-error:	1.00E+01	

2-WL1-9		
30-JAN-84	9.60E+00	
+/-error:	3.80E+00	
25-APR-84	1.90E+00	
+/-error:	3.30E+00	
09-JUL-84	-8.80E-01	
+/-error:	3.20E+00	
25-OCT-84	-1.60E+00	
+/-error:	7.70E+00	

2-WL2-1	
30-JAN-84	1.00E+01
+/-error:	3.20E+00
27-APR-84	4.20E+00
+/-error:	3.30E+00
09-JUL-84	-6.10E-01
+/-error:	3.10E+00
25-OCT-84	-1.40E+00
+/-error:	5.80E+00

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
2-W15-2								
30-JAN-84			3.60E+00					
+/-error:			3.20E+00					
27-APR-84			1.60E+00					
+/-error:			3.30E+00					
18-JUL-84		-3.40E-01	2.97E+00		3.18E+01			
+/-error:		7.10E+00	3.40E+00		4.40E+01			
25-OCT-84			-3.10E+00					
+/-error:			7.50E+00					
2-W18-3								
26-JAN-84			7.80E+00					
+/-error:			3.10E+00					
27-APR-84			7.00E-01					
+/-error:			3.30E+00					
09-JUL-84			-1.30E+00					
+/-error:			3.20E+00					
25-OCT-84			-2.70E+00					
+/-error:			6.90E+00					
2-W19-4								
30-JAN-84			-6.20E-01					
+/-error:			3.20E+00					
2-W21-1								
30-JAN-84			2.10E+00					
+/-error:			3.20E+00					
27-APR-84			2.90E+00					
+/-error:			3.30E+00					

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PAGE 18

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
2-W21-1 09-JUL-84 +/-error:				-3.90E+00 3.20E+00				
25-OCT-84 +/-error:				-2.50E+00 6.00E+00				
2-W22-7 30-JAN-84 +/-error:				5.40E+00 3.20E+00				
01-MAY-84 +/-error:				-1.70E+00 3.20E+00				
09-JUL-84 +/-error:				-2.50E+00 3.20E+00				
25-OCT-84 +/-error:				-1.30E+00 7.70E+00				
2-W22-9 26-JAN-84 +/-error:				3.10E+00 3.10E+00				
01-MAY-84 +/-error:				-4.80E-01 3.20E+00				
09-JUL-84 +/-error:				-1.50E+00 3.20E+00				
25-OCT-84 +/-error:				-2.90E+00 6.70E+00				
2-W22-10 02-FEB-84 +/-error:	1.70E+01 3.00E+00	5.80E+00 2.30E+00			5.70E+00 3.30E+00			

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
<b>2-W22-10</b>								
25-APR-84	3.00E+00	5.50E+00		2.50E+00				
+/-error:	2.70E+00	2.10E+00		3.30E+00				
18-JUL-84	-6.40E-01	5.29E+00	1.07E+01	5.28E-01		-2.40E+01		
+/-error:	5.50E+00	6.90E+00	5.55E+00	7.20E+00		4.40E+01		
26-OCT-84	8.50E-01	3.60E+00		-1.70E+00				
+/-error:	2.50E+00	4.30E+00		7.20E+00				
<b>3-1-1</b>								
23-MAR-84				1.70E+00	1.30E+01		7.40E-03	4.30E-01
+/-error:				3.10E+00				
04-JUN-84				2.10E+00	1.80E+01		9.30E-03	3.50E-01
+/-error:				3.30E+00				
26-SEP-84				-5.30E-01	2.30E+01		4.00E-03	3.60E-01
+/-error:				3.80E+00				
28-DEC-84				-1.90E+00	2.30E+00		1.20E-03	4.70E-01
+/-error:				3.20E+00	2.30E+00			
<b>3-1-2</b>								
29-MAR-84				1.20E+01	1.70E+01		1.00E-02	3.80E-01
+/-error:				3.20E+00				
28-JUN-84			2.70E+01	1.60E+00	1.40E+01		8.90E-03	3.00E-01
+/-error:			6.70E+00	4.00E+00				
26-SEP-84				1.90E+01	1.90E+01		3.30E-03	3.30E-01
+/-error:				4.40E+00				
28-DEC-84				-1.90E+00	1.50E+01		2.00E-03	4.50E-01
+/-error:				3.20E+00	3.30E+00			
<b>3-1-3</b>								
23-MAR-84				2.10E+00	4.40E+01		6.30E-04	3.20E-01
+/-error:				3.10E+00				

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-1-3 04-JUN-84 +/-error:				-3.10E+00 3.20E+00	5.20E+01		8.20E-03	4.30E-01
24-SEP-84 +/-error:				1.10E+01 4.20E+00	2.70E+01		3.80E-03	4.20E-01
3-1-4 23-MAR-84 +/-error:				-5.70E+00 3.10E+00	1.50E+01		6.30E-03	3.80E-01
29-JUN-84 +/-error:				6.30E+00 3.20E+00	9.20E+00 3.00E+00		1.10E-02	6.40E-01
26-SEP-84 +/-error:				3.00E+00 3.30E+00	1.40E+01 3.90E+00		3.20E-03	4.00E-01
28-DEC-84 +/-error:				-6.80E-01 3.20E+00	8.40E+00 3.00E+00		1.80E-03	3.80E-01
3-1-5 06-FEB-84 +/-error:				5.00E+00 3.20E+00	4.80E+01		6.20E-03	7.30E-01
13-APR-84 +/-error:				3.90E+00 3.20E+00	2.40E+01		9.90E-03	3.80E-01
20-JUL-84 +/-error:				1.10E+01 3.30E+00	8.90E+00 3.30E+00		3.40E-03	3.60E-01
12-OCT-84 +/-error:				-3.50E+00 4.90E+00	1.20E+01 3.70E+00		3.10E-03	4.70E-01
3-1-6 23-MAR-84 +/-error:				6.90E-01 3.00E+00	2.70E+01		8.60E-03	3.50E-01

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-1-6 29-JUN-84 +/-error:				-9.10E-01 3.20E+00	1.10E+01		7.10E-03	4.50E-01
26-SEP-84 +/-error:				-5.60E-01 3.30E+00	6.50E+00 3.20E+00		3.60E-03	2.00E-01
28-DEC-84 +/-error:				-4.10E+00 3.20E+00	1.10E+01		1.50E-03	4.80E-01
3-2-1 23-MAR-84 +/-error:				6.10E+00 3.10E+00	9.50E+00 3.00E+00		2.10E-03	3.00E-01
25-JUL-84 +/-error:				5.50E+00 3.40E+00	1.10E+01		1.00E-03	1.50E-01
24-SEP-84 +/-error:				8.40E+00 3.80E+00	6.00E+00 3.10E+00		1.70E-03	2.70E-01
3-2-2 23-MAR-84 +/-error:				5.40E-01 3.10E+00	1.80E+01		2.10E-03	5.20E-01
29-JUN-84 +/-error:				-9.10E-01 3.20E+00	2.20E+01		3.80E-03	5.60E-01
24-SEP-84 +/-error:					2.30E+01		3.00E-03	2.70E-01
3-2-3 29-MAR-84 +/-error:				-2.00E+00 3.20E+00	9.40E+00 3.80E+00		3.70E-03	5.00E-01
04-JUN-84 +/-error:				2.40E-01 3.30E+00	1.20E+01 3.70E+00		4.40E-03	3.30E-01

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-2-3 12-OCT-84 +/-error:				3.40E+01 3.20E+00	1.50E+01		0.00E+00	4.00E-01
3-3-1 23-MAR-84 +/-error:				1.70E+00 3.10E+00	1.40E+01 4.20E+00		3.70E-03	2.10E-01
04-JUN-84 +/-error:				3.20E+00 3.30E+00	1.10E+01 3.20E+00		2.40E-03	1.80E-01
24-SEP-84 +/-error:				1.50E+01 5.00E+00	1.00E+01 3.10E+00		2.10E-03	1.40E-01
3-3-2 29-MAR-84 +/-error:				4.70E+00 3.20E+00	1.00E+01 3.90E+00		5.20E-03	2.30E-01
04-JUN-84 +/-error:				5.60E+00 3.30E+00	1.20E+01 3.60E+00		2.10E-02	3.10E-01
26-SEP-84 +/-error:				2.40E+00 4.00E+00	1.40E+01 3.30E+00		7.70E-03	1.90E-01
21-DEC-84 +/-error:				-4.10E+00 3.40E+00	1.10E+01 3.70E+00		2.30E-03	3.40E-01
3-3-3 05-APR-84 +/-error:				5.50E+00 4.00E+00	1.20E+01 4.00E+00		6.00E-03	2.30E-01
04-JUN-84 +/-error:				7.10E+00 3.30E+00	1.50E+01 4.30E+00		3.50E-03	2.00E-01
12-OCT-84 +/-error:				2.30E+00 3.20E+00	1.20E+01 3.30E+00		7.40E-04	3.00E-01

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-3-3 28-DEC-84 +/-error:				5.50E+00 3.20E+00	1.00E+01 2.80E+00		1.40E-03	2.60E-01
3-3-6 29-MAR-84 +/-error:				5.10E+00 3.20E+00	1.00E+01		6.80E-03	2.60E-01
04-JUN-84 +/-error:				-3.40E+00 3.30E+00	1.10E+01		5.30E-03	3.00E-01
12-OCT-84 +/-error:				8.50E+00 3.30E+00	1.40E+01 3.90E+00		3.40E-03	3.30E-01
21-DEC-84 +/-error:				-4.10E+00 3.40E+00	1.10E+01		2.30E-03	3.40E-01
3-3-7 05-APR-84 +/-error:				-5.80E-01 3.20E+00	1.00E+01		7.40E-03	2.80E-01
23-JUL-84 +/-error:				-6.60E-01 3.20E+00	5.00E-01 2.10E+00		3.30E-03	2.60E-01
12-OCT-84 +/-error:				3.80E+00 3.30E+00	1.20E+01		8.50E-04	3.60E-01
21-DEC-84 +/-error:				-4.10E+00 3.20E+00	5.00E-01 2.10E+00		6.90E-04	3.60E-01
3-3-9 06-FEB-84 +/-error:		-5.30E-01 1.70E+00		1.20E+00 3.20E+00	1.30E+01 3.30E+00		4.20E-03	4.30E-01
13-APR-84 +/-error:		2.30E+00 1.40E+00		6.10E-01 3.30E+00	1.20E+00 1.90E+00		3.50E-03	3.60E-01

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-3-9 23-JUL-84 +/-error:		-6.80E-01 5.90E+00		1.10E+00 3.30E+00	1.20E+01 4.10E+00		1.00E-03	2.30E-01
12-OCT-84 +/-error:		3.90E+00 4.20E+00		-1.00E+00 4.20E+00	1.80E+01		0.00E+00	3.00E-01
3-3-10 23-MAR-84 +/-error:		-2.80E-01 9.20E-01		6.10E+00 3.10E+00	1.70E+01 4.40E+00		3.70E-03	3.90E-01
04-JUN-84 +/-error:		1.20E+00 1.80E+00		1.40E-01 3.30E+00	1.20E+01		3.50E-03	3.90E-01
12-OCT-84 +/-error:		-3.60E+00 4.20E+00		-1.00E+00 4.70E+00	2.20E+01		0.00E+00	4.10E-01
28-DEC-84 +/-error:		1.30E+00 1.50E+00		-1.90E+00 3.30E+00	1.60E+01		8.50E-04	4.70E-01
3-3-11 06-FEB-84 +/-error:		8.80E+00 2.60E+00		4.20E+00 3.20E+00	2.30E+01		6.00E-03	4.00E-01
13-APR-84 +/-error:		5.80E+00 1.90E+00		1.10E+00 3.30E+00	1.60E+01		5.10E-03	3.60E-01
21-AUG-84 +/-error:		9.50E+00 4.40E+00		-2.80E+00 3.20E+00	1.90E+01		1.00E-03	1.50E-01
12-OCT-84 +/-error:		7.00E+00 4.50E+00		-3.80E+00 3.20E+00	1.80E+01		0.00E+00	3.90E-01
3-3-12 23-MAR-84 +/-error:		1.20E+00 1.20E+00		3.20E+00 3.10E+00	2.10E+01		7.40E-03	4.00E-01

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-3-12 12-OCT-84 +/-error:		-2.00E+00 4.30E+00		-8.60E-01 3.70E+00	3.40E+01		1.60E-03	4.00E-01
28-DEC-84 +/-error:		1.00E+00 1.50E+00		4.00E+00 3.20E+00	6.60E+01		1.50E-03	4.30E-01
3-4-1 05-APR-84 +/-error:				-1.30E+00 3.30E+00	1.10E+01		6.20E-03	2.60E-01
04-JUN-84 +/-error:				1.00E+00 3.30E+00	1.10E+01		6.10E-03	2.70E-01
28-DEC-84 +/-error:				1.70E+00 3.20E+00	1.50E+01 3.70E+00		1.40E-03	3.80E-01
3-4-7 23-MAR-84 +/-error:				1.70E+00 3.10E+00	2.90E+01		6.80E-03	3.80E-01
04-JUN-84 +/-error:				-3.20E+00 3.30E+00	2.10E+01		6.80E-03	3.80E-01
12-OCT-84 +/-error:				-1.00E+00 3.20E+00	3.10E+01		2.00E-03	4.20E-01
28-DEC-84 +/-error:				-6.70E-01 3.20E+00	3.00E+01		1.70E-03	4.00E-01
3-4-9 06-FEB-84 +/-error:		3.60E+00 2.20E+00		2.10E+00 3.20E+00	1.10E+01		5.10E-03	4.20E-01
13-APR-84 +/-error:		8.70E-01 1.20E+00		9.50E+00 3.20E+00	1.60E+01		6.20E-03	3.00E-01

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PAGE 26

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-4-9 19-JUL-84 +/-error:		1.30E+00 5.80E+00		6.40E+00 3.30E+00	4.90E+00 2.50E+00		2.60E-03	2.00E-01
12-OCT-84 +/-error:	-4.20E+00 4.00E+00			-1.00E+00 4.20E+00	2.10E+01		7.40E-04	3.70E-01
3-4-10 23-MAR-84 +/-error:		-1.90E-01 9.80E-01		5.10E+00 3.10E+00	1.60E+01		4.80E-03	3.50E-01
04-JUN-84 +/-error:		1.00E+00 1.20E+00		-9.30E-01 3.30E+00	1.70E+01		4.70E-03	3.50E-01
12-OCT-84 +/-error:	5.00E+00 4.30E+00			4.70E+00 4.70E+00	2.50E+01		2.00E-03	3.60E-01
28-DEC-84 +/-error:	2.60E+00 1.50E+00			-4.50E+00 3.20E+00	2.50E+01		1.80E-03	4.00E-01
3-5-1 05-APR-84 +/-error:				3.70E-01 3.30E+00	7.90E+00 3.20E+00		6.20E-03	2.50E-01
29-JUN-84 +/-error:				9.10E+00 3.40E+00	1.10E+01 3.10E+00		8.90E-03	4.80E-01
12-OCT-84 +/-error:				2.60E+01 6.30E+00	6.20E+00 3.20E+00		4.20E-04	2.60E-01
28-DEC-84 +/-error:				8.20E+00 3.20E+00	8.40E+00 3.10E+00		7.90E-04	2.60E-01
3-6-1 29-MAR-84 +/-error:				4.20E+00 3.20E+00	7.00E+00 2.80E+00		5.20E-03	2.20E-01

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-6-1 29-JUN-84 +/-error:				1.20E+01 3.30E+00	7.20E+00 3.70E+00		7.10E-03	3.30E-01
12-OCT-84 +/-error:				8.50E+00 3.20E+00	1.20E+01 3.30E+00		1.50E-03	2.60E-01
28-DEC-84 +/-error:				1.60E+01 4.00E+00	9.20E+00 2.70E+00		6.90E-04	3.10E-01
3-8-1 29-MAR-84 +/-error:				3.10E+00 3.10E+00	4.90E+00 3.00E+00		5.90E-03	2.00E-01
29-JUN-84 +/-error:				1.50E+00 3.30E+00	8.90E+00 3.90E+00		4.90E-03	3.10E-01
26-SEP-84 +/-error:				3.00E+00 3.30E+00	3.70E+00 2.40E+00		4.50E-03	1.60E-01
3-8-2 29-MAR-84 +/-error:				5.70E+00 3.20E+00	2.80E+00 3.20E+00		7.90E-03	2.50E-01
29-JUN-84 +/-error:				-1.50E+00 3.20E+00	4.00E+00 2.90E+00		6.80E-03	4.80E-01
12-OCT-84 +/-error:				-1.00E+00 4.80E+00	2.20E+00 2.70E+00		1.60E-03	2.90E-01
28-DEC-84 +/-error:				2.20E+00 3.30E+00	2.70E+00 2.80E+00		1.20E-03	3.10E-01
3-8-3 29-MAR-84 +/-error:				3.90E+00 3.20E+00	6.20E+00 3.10E+00		4.30E-03	2.60E-01

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PAGE 28

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
3-8-3 15-JUN-84 +/-error:				-2.00E+00 3.30E+00	8.20E+00 2.90E+00		1.00E-03	4.00E-01
26-SEP-84 +/-error:				1.20E+01 3.40E+00	3.50E+00 2.60E+00		1.10E-03	2.50E-01
28-DEC-84 +/-error:				5.10E+00 3.20E+00	4.70E+00 2.10E+00		1.20E-03	3.80E-01
3-8-4 06-FEB-84 +/-error:				-3.60E-01 3.20E+00	4.70E+00 2.30E+00		5.50E-03	4.90E-01
13-APR-84 +/-error:				-8.50E-01 3.20E+00	5.50E+00 3.00E+00		5.10E-03	2.40E-01
23-JUL-84 +/-error:				-4.00E+00 3.20E+00	1.70E+00 2.50E+00		1.30E-03	2.10E-01
12-OCT-84 +/-error:				-1.00E+00 3.20E+00	7.00E-01 2.50E+00		1.50E-03	3.10E-01
4-S1-7B 11-JAN-84 +/-error:				-2.30E+00 3.00E+00				
12-APR-84 +/-error:				2.20E+00 3.20E+00				
23-JUL-84 +/-error:				-1.70E+00 3.30E+00				
16-OCT-84 +/-error:				1.50E+01 4.80E+00				
4-S1-7C 11-JAN-84 +/-error:				3.00E+00 3.10E+00			8.20E-03	2.40E-01

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PAGE 29

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
4-S1-7C 12-APR-84 +/-error:				9.60E+00 3.20E+00			1.10E-02	3.20E-01
23-JUL-84 +/-error:				1.40E+00 3.30E+00			4.70E-03	2.20E-01
16-OCT-84 +/-error:				5.10E+00 4.70E+00	1.30E+01 4.30E+00		2.40E-03	2.50E-01
4-S1-8A 11-JAN-84 +/-error:				3.20E+01 4.20E+00	4.50E+00 2.20E+00		1.30E-02	3.60E-01
12-APR-84 +/-error:				1.20E+01 3.20E+00	4.00E+00 3.30E+00		1.80E-02	2.90E-01
23-JUL-84 +/-error:				1.20E+01 3.20E+00	4.40E+00 3.60E+00		7.40E-03	2.00E-01
16-OCT-84 +/-error:				1.20E+01 7.70E+00	9.50E+00 3.10E+00		4.90E-03	3.50E-01
4-S1-8B 11-JAN-84 +/-error:				5.50E+00 3.10E+00	8.90E+00 2.70E+00		9.10E-03	2.70E-01
12-APR-84 +/-error:				9.40E+00 3.20E+00	4.70E+00 2.90E+00		1.00E-02	2.30E-01
23-JUL-84 +/-error:				1.10E+00 3.30E+00	8.50E+00 3.30E+00		3.10E-03	1.20E-01
16-OCT-84 +/-error:				4.00E-01 5.10E+00	1.00E+01 3.50E+00		1.60E-03	2.90E-01
4-S0-7 11-JAN-84 +/-error:				4.10E+00 3.10E+00				

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PAGE 30

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
4-S0-7 12-APR-84 +/-error:				1.90E+01 4.20E+00				
23-JUL-84 +/-error:				5.20E-01 3.20E+00				
16-OCT-84 +/-error:				3.00E+00 3.90E+00				
4-S0-8 11-JAN-84 +/-error:				2.00E+00 3.10E+00				
12-APR-84 +/-error:				1.40E+01 4.00E+00				
23-JUL-84 +/-error:				-3.90E+00 3.20E+00				
16-OCT-84 +/-error:				4.20E+00 5.00E+00				
6-S6-EAB 15-MAR-84 +/-error:				2.30E+00 2.70E+00				
27-JUN-84 +/-error:				5.40E+00 3.60E+00				
22-SEP-84 +/-error:				8.40E-01 2.60E+00				
6-S6-EAD 15-MAR-84 +/-error:				3.50E+00 2.20E+00				

9 2 1 2 3 3 2 3 9 5 0

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PAGE 31

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-S6-EAD 27-JUN-84 +/-error:					5.00E+00 2.50E+00			
22-SEP-84 +/-error:					5.50E+00 2.60E+00			
6-S12-29 16-AUG-84 +/-error:				4.90E+00 3.30E+00				
6-S18-51 21-FEB-84 +/-error:							1.10E+01	
01-JUN-84 +/-error:							7.50E+00	
21-SEP-84 +/-error:							6.70E+00	
18-DEC-84 +/-error:							8.20E+00	
6-S19-E13 15-MAR-84 +/-error:					5.70E+00 3.10E+00			3.30E-01
27-JUN-84 +/-error:					6.70E+00 3.10E+00			3.20E-01
22-SEP-84 +/-error:					4.70E+00 3.00E+00			1.40E-01
6-S27-E14 06-FEB-84 +/-error:					3.20E+00 2.10E+00	5.50E-03	2.00E-01	

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9 2 1 2 1 3 2 1 9 5 1

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PAGE 32

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-S27-EL4 14-MAR-84 +/-error:					5.50E+00 2.50E+00		3.90E-03	1.80E-01
05-APR-84 +/-error:					6.40E+00 3.50E+00		6.20E-03	2.20E-01
13-APR-84 +/-error:					7.90E+00 3.60E+00		6.00E-03	2.10E-01
01-JUN-84 +/-error:					1.00E+01 3.70E+00		3.50E-03	2.10E-01
21-JUN-84 +/-error:					3.70E+00 2.80E+00		4.90E-03	2.80E-01
10-AUG-84 +/-error:					3.50E+00 3.00E+00		1.10E-03	1.20E-01
12-SEP-84 +/-error:					9.50E+00 3.80E+00		7.10E-04	
08-OCT-84 +/-error:					6.90E+00 2.80E+00		2.70E-03	1.20E-01
19-NOV-84 +/-error:					7.00E+00 2.90E+00		8.50E-04	2.50E-01
21-DEC-84 +/-error:					3.00E+00 1.90E+00		7.40E-04	2.50E-01
6-S29-EL2 15-MAR-84 +/-error:					4.90E+00 2.40E+00			2.40E-01
27-JUN-84 +/-error:					4.40E+00 3.50E+00			3.40E-01
23-SEP-84 +/-error:					6.90E+00 3.20E+00			1.50E-01

9 2 1 2 5 3 2 0 9 5 2

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PAGE 33

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-S30E15A 15-MAR-84 +/-error:					3.50E+00 2.90E+00		3.00E-03	1.30E-01
27-JUN-84 +/-error:					2.30E+00 2.10E+00		2.40E-03	2.50E-01
22-SEP-84 +/-error:					4.20E+00 2.40E+00		1.90E-03	3.80E-02
6-2-3 20-JAN-84 +/-error:					3.80E+00 3.10E+00			
18-APR-84 +/-error:					3.90E+00 3.30E+00			
17-JUL-84 +/-error:					-1.50E+00 3.30E+00			
08-OCT-84 +/-error:					6.70E-01 3.70E+00			
6-3-45 16-AUG-84 +/-error:					8.50E+00 3.30E+00			
6-8-17 17-MAR-84 +/-error:					7.70E+00 3.10E+00			
24-JUL-84 +/-error:					5.00E+00 3.90E+00			
28-SEP-84 +/-error:					3.40E+00 3.20E+00			

9 2 1 2 1 3 2 0 9 5 3

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PAGE 34

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-8-25 17-MAR-84 +/-error:			-6.70E-01 3.00E+00					
26-JUL-84 +/-error:			7.60E+00 3.30E+00					
28-SEP-84 +/-error:			-2.60E+00 3.20E+00					
6-15-15B 17-MAR-84 +/-error:			4.70E+00 3.00E+00					
25-JUN-84 +/-error:			1.60E+00 3.10E+00					
23-SEP-84 +/-error:			1.20E+01 5.80E+00					
6-15-26 17-MAR-84 +/-error:			8.00E+00 3.10E+00					
24-JUL-84 +/-error:			-1.00E+00 3.30E+00					
16-OCT-84 +/-error:			8.10E+00 3.20E+00					
31-DEC-84 +/-error:			-9.10E-01 3.30E+00					
6-17-5 20-MAR-84 +/-error:			-9.80E-01 3.00E+00					

9 2 1 2 3 3 2 0 9 5 4

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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6-17-5  
 21-JUN-84  
 +/-error:  
 8.90E+00  
 3.30E+00

27-SEP-84  
 +/-error:  
 -1.00E+01  
 3.30E+00

6-20-5SA  
 30-MAR-84  
 +/-error:  
 1.10E+00  
 3.20E+00

28-JUN-84  
 +/-error:  
 9.80E+00  
 3.40E+00

30-SEP-84  
 +/-error:  
 1.80E+00  
 3.20E+00

6-20-20  
 17-MAR-84  
 +/-error:  
 3.70E+00  
 3.10E+00

24-JUL-84  
 +/-error:  
 2.10E+01  
 4.50E+00

30-SEP-84  
 +/-error:  
 -1.60E+00  
 3.20E+00

6-22-70  
 01-NOV-84  
 +/-error:  
 -1.50E+00  
 3.30E+00

6-24-33  
 16-MAR-84  
 +/-error:  
 6.00E+00  
 3.10E+00

9 2 1 2 1 3 2 1 9 5 5

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PAGE 36

WELL NO.	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-24-33								
30-JUL-84				9.70E+00				
+/-error:				3.30E+00				
16-OCT-84				1.70E+01				
+/-error:				5.70E+00				
6-26-15A								
21-MAR-84				1.60E+01				
+/-error:				3.10E+00				
21-JUN-84				1.50E+01				
+/-error:				3.30E+00				
25-SEP-84				9.30E+00				
+/-error:				4.00E+00				
6-27-8								
20-MAR-84				1.40E+01				
+/-error:				3.10E+00				
21-JUN-84				1.50E+01				
+/-error:				4.50E+00				
27-SEP-84				1.30E+01				
+/-error:				3.30E+00				
6-28-40								
06-JAN-84		2.70E+00						
+/-error:		3.00E+00						
30-MAR-84			2.90E+00					
+/-error:			3.20E+00					
28-JUN-84			1.90E+00					
+/-error:			3.20E+00					

9 2 1 2 3 3 2 0 9 5 6

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PAGE 37

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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6-28-40  
 30-SEP-84  
 +/-error:

-3.10E+00  
 3.20E+00

6-28-40P  
 06-JAN-84  
 +/-error:

2.00E+00  
 3.10E+00

30-MAR-84  
 +/-error:  
 -7.10E-01  
 3.10E+00

28-JUN-84  
 +/-error:  
 -3.30E+00  
 3.20E+00

30-SEP-84  
 +/-error:  
 -3.60E+00  
 3.20E+00

6-28-52A  
 06-APR-84  
 +/-error:

-5.10E-01  
 4.00E+00

26-JUN-84  
 +/-error:  
 4.30E+00  
 3.20E+00

15-OCT-84  
 +/-error:  
 9.60E+00  
 3.20E+00

6-31-31  
 06-JAN-84  
 +/-error:

-1.40E+00  
 3.00E+00

30-MAR-84  
 +/-error:  
 4.00E+00  
 3.20E+00

22-JUN-84  
 +/-error:  
 6.40E+00  
 3.20E+00

9 2 1 2 1 3 2 1 9 5 7

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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6-31-31  
 30-SEP-84  
 +/-error:

-2.10E+00  
 3.20E+00

6-31-31P  
 06-JAN-84  
 +/-error:

2.00E+00  
 3.10E+00

30-MAR-84  
 +/-error:

-5.20E+00  
 3.10E+00

22-JUN-84  
 +/-error:

6.80E+00  
 3.30E+00

30-SEP-84  
 +/-error:

7.60E+00  
 3.20E+00

6-31-53B  
 26-JUN-84  
 +/-error:

-1.30E+00  
 3.20E+00

6-32-22  
 20-MAR-84  
 +/-error:

1.30E+01  
 3.10E+00

24-JUL-84  
 +/-error:

1.10E+01  
 3.30E+00

25-SEP-84  
 +/-error:

6.70E+00  
 3.30E+00

6-32-43  
 22-MAR-84  
 +/-error:

7.00E+00  
 3.10E+00

9 2 1 2 5 3 2 0 9 5 3

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PAGE 39

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-32-43 24-JUL-84 +/-error:				6.30E-01 3.30E+00				
15-OCT-84 +/-error:				9.50E+00 3.20E+00				
6-32-62 19-JAN-84 +/-error:	9.90E+00 2.80E+00							
09-MAY-84 +/-error:	3.30E+00 2.80E+00							
21-AUG-84 +/-error:	3.50E+00 2.30E+00							
30-OCT-84 +/-error:	1.30E+00 2.20E+00							
6-32-70B 24-JAN-84 +/-error:			1.10E+01 3.20E+00					
09-MAY-84 +/-error:			5.70E+00 3.30E+00					
15-AUG-84 +/-error:			4.90E+00 3.30E+00					
26-OCT-84 +/-error:			-1.90E+00 5.70E+00					
6-32-72 20-JAN-84 +/-error:			1.70E+01 4.20E+00					

9 2 | 2 | 3 2 0 9 5 9

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-32-72 27-APR-84 +/-error:				6.20E-01 3.70E+00				
21-AUG-84 +/-error:				3.30E+00 3.20E+00				
26-OCT-84 +/-error:				-2.20E+00 5.70E+00				
6-32-77 20-JAN-84 +/-error:				2.30E+00 3.20E+00				
09-MAY-84 +/-error:				5.70E+00 3.20E+00				
21-AUG-84 +/-error:				2.60E+00 3.20E+00				
26-OCT-84 +/-error:				-2.10E+00 5.00E+00				
6-33-42 22-MAR-84 +/-error:				1.00E+01 3.10E+00				
15-OCT-84 +/-error:				6.70E+00 4.30E+00				
6-33-56 16-MAR-84 +/-error:	3.50E+00 2.90E+00			3.00E+00 3.00E+00				
14-JUN-84 +/-error:	4.50E+00 2.90E+00			8.50E-01 3.90E+00				

9 2 1 2 3 2 0 9 6 0

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-33-56 15-OCT-84 +/-error:	3.70E+00 2.90E+00			7.40E+00 3.20E+00				
6-34-39A 22-MAR-84 +/-error:				1.30E+01 3.90E+00				
26-JUN-84 +/-error:				6.10E+00 3.20E+00				
25-SEP-84 +/-error:				1.20E+01 3.40E+00				
6-34-41B 22-MAR-84 +/-error:				4.90E+00 3.10E+00				
24-JUL-84 +/-error:				2.20E+00 3.20E+00				
15-OCT-84 +/-error:				7.80E+00 3.20E+00				
6-34-42 22-MAR-84 +/-error:				7.40E+00 3.10E+00				
24-JUL-84 +/-error:				4.40E+00 3.30E+00				
15-OCT-84 +/-error:				7.30E+00 3.10E+00				
6-34-51 16-MAR-84 +/-error:				4.30E+00 3.00E+00				

9 2 1 2 2 3 2 3 9 3 1

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WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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6-34-51  
 14-JUN-84  
 +/-error:  
 -4.40E+00  
 3.30E+00

15-OCT-84  
 +/-error:  
 -5.30E-01  
 3.80E+00

6-35-9  
 22-MAR-84  
 +/-error:  
 8.70E+00  
 3.10E+00

21-JUN-84  
 +/-error:  
 9.60E+00  
 3.30E+00

24-SEP-84  
 +/-error:  
 1.70E+01  
 4.80E+00

6-35-66  
 24-JAN-84  
 +/-error:  
 1.30E+01  
 3.80E+00

09-MAY-84  
 +/-error:  
 8.60E+00  
 3.30E+00

21-AUG-84  
 +/-error:  
 2.10E+00  
 3.30E+00

26-OCT-84  
 +/-error:  
 7.80E+00  
 4.00E+00

6-35-70  
 24-JAN-84  
 +/-error:  
 6.50E+00  
 3.10E+00

09-MAY-84  
 +/-error:  
 3.70E+00  
 3.30E+00

9 2 1 2 3 3 2 0 9 0 2

01-JAN-84 TO 31-DEC-84

PAGE 43

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-35-70 15-AUG-84 +/-error:				1.30E+00 3.20E+00				
26-OCT-84 +/-error:				5.00E+00 4.10E+00				
6-36-46P 22-JUN-84 +/-error:				-1.10E+00 3.20E+00				
29-NOV-84 +/-error:				3.50E+00 3.10E+00				
6-36-46Q 22-JUN-84 +/-error:				-7.70E-01 3.20E+00				
6-37-E4 25-JAN-84 +/-error:				3.50E+00 3.10E+00				
17-FEB-84 +/-error:				7.30E-01 3.10E+00				
21-MAR-84 +/-error:				3.40E+00 3.00E+00				
07-MAY-84 +/-error:				-2.00E+00 3.20E+00				
31-MAY-84 +/-error:				7.30E+00 3.30E+00				
19-JUN-84 +/-error:				1.00E+01 3.30E+00				

9 2 1 2 1 3 2 3 9 5 3

01-JAN-84 TO 31-DEC-84

PAGE 44

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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6-37-E4  
 16-JUL-84  
 +/-error:  
 -3.60E+00  
 3.20E+00

09-AUG-84  
 +/-error:  
 2.50E+01  
 4.60E+00

13-SEP-84  
 +/-error:  
 3.60E-01  
 3.20E+00

08-OCT-84  
 +/-error:  
 1.80E+01  
 3.80E+00

15-NOV-84  
 +/-error:  
 -4.00E+00  
 3.40E+00

13-DEC-84  
 +/-error:  
 1.20E+01  
 4.90E+00

6-37-43  
 22-MAR-84  
 +/-error:  
 9.90E+00  
 3.60E+00

26-JUN-84  
 +/-error:  
 3.80E+00  
 3.20E+00

25-SEP-84  
 +/-error:  
 -2.50E+00  
 3.30E+00

6-38-15  
 20-MAR-84  
 +/-error:  
 1.60E+01  
 3.10E+00

21-JUN-84  
 +/-error:  
 1.50E+01  
 3.30E+00

27-SEP-84  
 +/-error:  
 7.70E+00  
 3.30E+00

9 2 1 2 3 3 2 0 9 5 4

01-JAN-84 TO 31-DEC-84

PAGE 45

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-38-65 16-JUN-84 +/-error:				3.40E+00				
				3.40E+00				
29-NOV-84 +/-error:				9.20E+00				
				4.10E+00				
6-38-70 20-JAN-84 +/-error:				3.40E+00				
				3.20E+00				
09-MAY-84 +/-error:				4.80E+00				
				3.30E+00				
15-AUG-84 +/-error:				8.50E+00				
				3.30E+00				
26-OCT-84 +/-error:				1.10E+01				
				4.70E+00				
6-39-0 25-JAN-84 +/-error:				1.30E+01				
				3.20E+00				
17-FEB-84 +/-error:				2.80E+00				
				3.10E+00				
21-MAR-84 +/-error:				1.00E+01				
				3.10E+00				
07-MAY-84 +/-error:				5.10E+00				
				3.30E+00				
31-MAY-84 +/-error:				2.10E+00				
				3.30E+00				
19-JUN-84 +/-error:				2.00E+00				
				3.40E+00				

01-JAN-84 TO 31-DEC-84

PAGE 46

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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6-39-0  
 16-JUL-84  
 +/-error:  
 4.90E+00  
 3.30E+00

09-AUG-84  
 +/-error:  
 1.70E+01  
 4.10E+00

13-SEP-84  
 +/-error:  
 2.70E+00  
 3.30E+00

08-OCT-84  
 +/-error:  
 2.90E+01  
 5.40E+00

13-DEC-84  
 +/-error:  
 4.30E+00  
 4.80E+00

6-39-39  
 27-NOV-84  
 +/-error:  
 -3.90E+00  
 3.30E+00

6-39-79  
 26-JAN-84  
 +/-error:  
 5.10E+00  
 4.50E+00

09-MAY-84  
 +/-error:  
 -3.50E+00  
 3.20E+00

26-OCT-84  
 +/-error:  
 -9.00E-01  
 4.70E+00

6-40-1  
 19-JUN-84  
 +/-error:  
 1.20E+01  
 5.40E+00

6-41-23  
 20-MAR-84  
 +/-error:  
 8.10E+00  
 3.10E+00

01-JAN-84 TO 31-DEC-84

PAGE 47

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-41-23 24-JUL-84 +/-error:				1.40E+00 3.30E+00				
25-SEP-84 +/-error:				5.50E+00 3.30E+00				
6-42-12A 22-MAR-84 +/-error:				8.30E+00 3.10E+00				
21-JUN-84 +/-error:				1.20E+01 3.30E+00				
27-SEP-84 +/-error:				-8.10E-01 3.30E+00				
6-44-4 25-JAN-84 +/-error:				9.80E+00 3.20E+00				
17-FEB-84 +/-error:				7.00E-01 3.20E+00				
21-MAR-84 +/-error:				4.50E+00 3.00E+00				
07-MAY-84 +/-error:				1.30E+00 3.20E+00				
31-MAY-84 +/-error:				-7.80E-01 3.30E+00				
19-JUN-84 +/-error:				-1.20E+00 3.90E+00				
16-JUL-84 +/-error:				2.10E+00 3.30E+00				

9 2 1 2 3 2 7 9 5 7

01-JAN-84 TO 31-DEC-84

PAGE 48

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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6-44-4  
 09-AUG-84  
 +/-error:  
 1.10E-01  
 3.30E+00

17-SEP-84  
 +/-error:  
 1.90E+00  
 3.30E+00

08-OCT-84  
 +/-error:  
 2.00E+01  
 5.20E+00

19-NOV-84  
 +/-error:  
 3.50E+00  
 3.40E+00

14-DEC-84  
 +/-error:  
 2.20E+00  
 3.20E+00

6-44-64  
 17-JAN-84  
 +/-error:  
 -1.20E+00  
 3.10E+00

16-APR-84  
 +/-error:  
 2.30E+00  
 3.30E+00

20-AUG-84  
 +/-error:  
 3.30E+00  
 3.40E+00

26-OCT-84  
 +/-error:  
 4.00E+00  
 3.20E+00

6-45-2  
 24-JAN-84  
 +/-error:  
 1.20E+01  
 3.20E+00

17-FEB-84  
 +/-error:  
 6.60E+00  
 3.10E+00

21-MAR-84  
 +/-error:  
 8.60E+00  
 3.10E+00

9 2 1 2 1 3 2 0 9 6 3

01-JAN-84 TO 31-DEC-84

PAGE 49

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-45-2 07-MAY-84 +/-error:			5.30E+00					
			3.30E+00					
31-MAY-84 +/-error:			6.00E+00					
			3.30E+00					
21-JUN-84 +/-error:			8.80E+00					
			3.30E+00					
16-JUL-84 +/-error:			-2.60E+00					
			3.20E+00					
09-AUG-84 +/-error:			9.20E+00					
			3.30E+00					
17-SEP-84 +/-error:			8.30E+00					
			3.30E+00					
08-OCT-84 +/-error:			1.50E+01					
			4.30E+00					
19-NOV-84 +/-error:			-1.60E+00					
			3.40E+00					
13-DEC-84 +/-error:			1.40E+01					
			4.80E+00					
6-45-42 24-JAN-84 +/-error:			1.10E+01					
			3.10E+00					
10-APR-84 +/-error:			9.20E+00					
			5.10E+00					
26-APR-84 +/-error:			1.90E+00					
			3.30E+00					
19-JUL-84 +/-error:			1.70E+01					
			4.10E+00					

B.149

9 2 1 2 7 3 2 0 9 0 9

01-JAN-84 TO 31-DEC-84

PAGE 50

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
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6-45-42  
30-OCT-84  
+/-error:

-3.30E+00  
3.30E+00

6-45-69A  
16-JUN-84  
+/-error:

-3.80E+00  
3.30E+00

11-DEC-84  
+/-error:

6.50E+00  
4.50E+00

6-46-21B  
24-JUL-84  
+/-error:

1.10E+01  
3.30E+00

6-47-46A  
25-JUN-84  
+/-error:

-9.10E-01  
3.10E+00

6-47-60  
17-JAN-84  
+/-error:

4.10E+00  
3.10E+00

11-APR-84  
+/-error:

2.00E+00  
4.10E+00

20-AUG-84  
+/-error:

-6.70E-01  
3.30E+00

30-OCT-84  
+/-error:

4.10E+00  
3.40E+00

6-49-55A  
17-JAN-84  
+/-error:

3.80E+00  
3.10E+00

9 2 1 2 3 6 2 0 9 7 9

01-JAN-84 TO 31-DEC-84

PAGE 51

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-49-55A 11-APR-84 +/-error:				4.40E+01				
20-AUG-84 +/-error:				3.90E+01				
30-OCT-84 +/-error:				4.70E+01				
				3.70E+00				
6-49-57 17-JAN-84 +/-error:				6.50E+00				
				4.30E+00				
11-APR-84 +/-error:				5.70E+01				
20-AUG-84 +/-error:				7.70E+01				
30-OCT-84 +/-error:				9.10E+01				
				4.00E+00				
6-50-53 18-JAN-84 +/-error:				1.70E+00				
				3.20E+00				
11-APR-84 +/-error:				2.00E+01				
				3.90E+00				
20-AUG-84 +/-error:				1.10E+01				
				3.40E+00				
30-OCT-84 +/-error:				1.20E+00				
				3.30E+00				
6-53-35 30-OCT-84 +/-error:				1.00E+01				
				3.30E+00				

9 2 1 2 . 3 2 ) 9 7 1

01-JAN-84 TO 31-DEC-84

PAGE 52

WELL NO. DATE	TOTAL ALPHA (PCI/L)	Sr-90 (PCI/L)	Cs-137 (PCI/L)	Co-60 (PCI/L)	U-nat (PCI/L)	Ru-106 (PCI/L)	Cr+6 (MG/L)	FLUORIDE (MG/L)
6-55-50C 14-MAY-84 +/-error:				-4.50E+00 8.30E+00				
11-DEC-84 +/-error:				-1.40E-01 3.20E+00				
6-59-58 03-OCT-84 +/-error:		6.80E-01 9.40E-01						
6-63-58 03-OCT-84 +/-error:		1.47E-01 8.80E-01						
6-66-103 01-JUN-84 +/-error:				-4.30E+00 3.20E+00				
6-68-105 01-JUN-84 +/-error:				-3.10E+00 3.30E+00				

**APPENDIX B.2**

**TRITIUM AND NITRATE CONCENTRATIONS  
IN THE GROUND WATER**

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01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
1-B3-1 22-MAY-84 +/-error:	8.70E+02 4.50E+02		7.30E+01	1-B4-2 22-MAY-84 +/-error:	2.30E+03 4.60E+02		1.70E+01
19-DEC-84 +/-error:	4.10E+03 5.20E+02			27-AUG-84 +/-error:	1.20E+03 4.80E+02		1.60E+01
				19-DEC-84 +/-error:	9.60E+03		1.90E+01
1-B3-2P 22-MAY-84 +/-error:	2.90E+02 4.40E+02		2.00E+00	1-B4-3 21-FEB-84 +/-error:	1.80E+03 4.60E+02	4.80E+00	
1-B3-2Q 22-MAY-84 +/-error:	1.50E+02 4.40E+02		1.10E+00	22-MAY-84 +/-error:	1.90E+03 4.60E+02		1.50E+01
19-DEC-84 +/-error:	3.10E+03 5.10E+02		2.00E+00	27-AUG-84 +/-error:	2.00E+03 4.90E+02		1.80E+01
				19-DEC-84 +/-error:	1.90E+05		2.20E+01
1-B4-1 21-FEB-84 +/-error:	3.80E+03 4.90E+02	5.00E+00		1-B4-4 22-MAY-84 +/-error:	3.80E+03 4.80E+02		2.30E+01
22-MAY-84 +/-error:	1.90E+03 4.60E+02		1.60E+01	—	—	—	—
27-AUG-84 +/-error:	1.60E+03 4.80E+02		1.60E+01	19-DEC-84 +/-error:	4.00E+03 5.20E+02		1.50E+01
19-DEC-84 +/-error:	1.30E+05		1.90E+01	1-B5-1 22-MAY-84 +/-error:	2.70E+02 4.40E+02		6.30E+00
1-B4-2 21-FEB-84 +/-error:	1.70E+03 4.60E+02	5.10E+00		—	—	—	—

<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>@</sup>— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.1

9 2 1 2 1 3 2 3 3 7 4

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-B5-1 27-AUG-84 +/-error:	6.40E+02 4.70E+02		1.00E+01	1-D5-12 20-SEP-84 +/-error:	2.60E+03 5.50E+02		6.20E+01
19-DEC-84 +/-error:	3.90E+03 5.20E+02		1.20E+01	30-NOV-84 +/-error:	2.80E+03 5.10E+02		4.70E+01
1-B9-1 22-MAY-84 +/-error:	5.90E+02 4.40E+02		2.40E+01	1-D8-3 23-FEB-84 +/-error:	3.90E+03 4.90E+02	1.20E+01	
19-DEC-84 +/-error:	3.70E+03 5.10E+02		2.30E+01	23-MAY-84 +/-error:	2.20E+03 4.60E+02		4.40E+00
				30-NOV-84 +/-error:	4.10E+03 5.30E+02		2.40E+01
1-D2-5 23-FEB-84 +/-error:	2.40E+03 4.70E+02	8.20E+01		1-F5-1 22-FEB-84 +/-error:	2.40E+02 4.50E+02	7.30E+00	
23-MAY-84 +/-error:	2.60E+03 4.70E+02		1.10E+02	11-MAY-84 +/-error:	1.10E+02 4.40E+02		8.20E+00
20-SEP-84 +/-error:	2.10E+03 5.40E+02		1.10E+02	23-AUG-84 +/-error:	4.10E+01 4.60E+02		2.50E+01
30-NOV-84 +/-error:	2.10E+03 5.10E+02		1.10E+02	06-DEC-84 +/-error:	7.40E+02 4.70E+02		3.50E+01
1-D5-12 23-FEB-84 +/-error:	3.70E+03 4.90E+02	3.70E+01		1-F5-3 17-FEB-84 +/-error:	1.20E+03 4.60E+02	1.30E+01	
23-MAY-84 +/-error:	2.90E+03 4.70E+02		5.60E+01				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.2

9 2 1 2 3 3 2 0 9 7 5

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
1-F5-3 11-MAY-84 +/-error:	7.70E+02 4.40E+02		6.60E+01	1-F7-1 11-MAY-84 +/-error:	6.70E+02 4.40E+02		8.00E+01
14-DEC-84 +/-error:	4.40E+03 5.20E+02		2.40E+01	23-AUG-84 +/-error:	6.20E+02 4.60E+02		2.80E+01
				06-DEC-84 +/-error:	9.90E+02 4.80E+02		2.90E+02
1-F5-4 22-FEB-84 +/-error:	1.80E+04	2.90E+01		1-F8-1 22-FEB-84 +/-error:	1.10E+04	1.20E+02	
11-MAY-84 +/-error:	1.80E+04		4.00E+01	11-MAY-84 +/-error:	9.90E+03		1.40E+02
23-AUG-84 +/-error:	1.80E+04		5.20E+01	23-AUG-84 +/-error:	8.20E+03		1.70E+02
06-DEC-84 +/-error:	1.70E+04		6.40E+01	06-DEC-84 +/-error:	8.30E+03		1.70E+02
1-F5-6 22-FEB-84 +/-error:	1.10E+03 4.60E+02	7.10E+00		1-F8-2 17-FEB-84 +/-error:	7.60E+03	2.90E+01	
11-MAY-84 +/-error:	4.70E+02 4.40E+02		9.20E+00	11-MAY-84 +/-error:	6.80E+03		4.40E+01
23-AUG-84 +/-error:	4.40E+02 4.60E+02		5.20E+00	23-AUG-84 +/-error:	4.20E+03 5.10E+02		5.40E+01
06-DEC-84 +/-error:	9.10E+02 4.70E+02		1.00E+01	14-DEC-84 +/-error:	5.70E+03 5.40E+02		1.10E+02
1-F7-1 22-FEB-84 +/-error:	1.30E+03 4.60E+02	2.00E+02					

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.3

9 2 1 2 3 2 1 9 7 6

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-H3-1 22-FEB-84 +/-error:	4.60E+03 5.00E+02	6.90E+01		1-H4-5 23-MAY-84 +/-error:	2.90E+02 4.40E+02		1.50E+01
23-MAY-84 +/-error:	3.00E+03 4.70E+02		7.50E+01	19-SEP-84 +/-error:	5.30E+02 5.00E+02		5.70E+01
19-SEP-84 +/-error:	3.10E+03 5.30E+02		7.80E+01	1-H4-6 22-FEB-84 +/-error:	3.20E+03 4.80E+02	1.70E+01	
1-H4-3 22-FEB-84 +/-error:	8.50E+02 4.50E+02	1.20E+03		23-MAY-84 +/-error:	2.30E+03 4.60E+02		2.60E+01
23-MAY-84 +/-error:	2.90E+02 4.40E+02		9.60E+02	19-SEP-84 +/-error:	2.80E+03 5.20E+02		3.20E+01
19-SEP-84 +/-error:	4.50E+02 5.00E+02		6.10E+02	1-K-11 02-MAR-84 +/-error:	2.50E+03 4.60E+02		5.20E+01
06-DEC-84 +/-error:	4.90E+02 4.70E+02		4.50E+02	23-MAY-84 +/-error:	1.40E+03 4.50E+02		4.10E+01
1-H4-4 22-FEB-84 +/-error:	8.70E+02 4.50E+02	8.50E+01		27-AUG-84 +/-error:	1.50E+03 4.80E+02		3.70E+01
23-MAY-84 +/-error:	6.40E+02 4.40E+02		2.20E+02	28-NOV-84 +/-error:	2.00E+03 5.20E+02		4.30E+01
19-SEP-84 +/-error:	3.30E+02 5.00E+02		6.20E+02	1-K-19 02-MAR-84 +/-error:	3.10E+04		4.20E+01
1-H4-5 22-FEB-84 +/-error:	2.90E+02 4.50E+02	4.80E-01					

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.4

9 2 1 2 3 8 2 0 9 7 7

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-K-19 23-MAY-84 +/-error:	2.30E+04		3.80E+01	1-K-27 02-MAR-84 +/-error:	2.70E+03		
27-AUG-84 +/-error:	1.40E+04		4.10E+01	29-MAY-84 +/-error:	3.80E+03		
28-NOV-84 +/-error:	1.50E+04		5.40E+01	27-AUG-84 +/-error:	2.80E+03		
				28-NOV-84 +/-error:	2.50E+03		
1-K-20 02-MAR-84 +/-error:	9.30E+02 4.40E+02		2.00E+01	1-K-28 02-MAR-84 +/-error:	2.10E+03 4.60E+02		
23-MAY-84 +/-error:	1.30E+03 4.50E+02		2.10E+01	29-MAY-84 +/-error:	2.70E+03 4.70E+02		
27-AUG-84 +/-error:	1.10E+03 4.80E+02		2.30E+01	27-AUG-84 +/-error:	2.70E+03 4.90E+02		
28-NOV-84 +/-error:	1.20E+03 5.10E+02		3.10E+01	28-NOV-84 +/-error:	2.30E+03 5.20E+02		
1-K-22 02-MAR-84 +/-error:	9.80E+02 4.40E+02		7.90E+00	1-K-29 02-MAR-84 +/-error:	4.60E+04		
23-MAY-84 +/-error:	7.10E+02 4.40E+02		1.10E+01	29-MAY-84 +/-error:	5.80E+04		
27-AUG-84 +/-error:	5.90E+02 4.70E+02		8.00E+00	27-AUG-84 +/-error:	4.20E+04		
28-NOV-84 +/-error:	1.10E+03 5.10E+02		5.70E+00				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.5

9 2 1 2 . 3 2 0 3 7 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-K-29 28-NOV-84 +/-error:	5.10E+04			1-N-4 06-MAR-84 +/-error:	3.40E+04		2.10E+01
				30-MAY-84 +/-error:	3.60E+04		1.80E+01
1-K-30 02-MAR-84 +/-error:	3.60E+05			29-AUG-84 +/-error:	3.70E+04		1.80E+01
29-MAY-84 +/-error:	4.50E+05			1-N-5 02-MAR-84 +/-error:	2.40E+04		3.70E+01
27-AUG-84 +/-error:	4.70E+05			31-MAY-84 +/-error:	3.20E+04		3.50E+01
28-NOV-84 +/-error:	4.20E+05			29-AUG-84 +/-error:	2.80E+04		3.60E+01
1-N-2 06-MAR-84 +/-error:	2.70E+04	2.20E+01		1-N-6 06-MAR-84 +/-error:	1.70E+04		
30-MAY-84 +/-error:	3.10E+04	2.40E+01		30-MAY-84 +/-error:	3.10E+04		
29-AUG-84 +/-error:	1.90E+04	4.00E+01		29-AUG-84 +/-error:	2.80E+04		
1-N-3 06-MAR-84 +/-error:	3.70E+04			1-N-7 01-MAR-84 +/-error:	1.60E+04	1.70E+00	
29-AUG-84 +/-error:	2.70E+04						

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 8 2 3 9 7 9

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-N-7 02-MAR-84 +/-error:	1.60E+04			1-N-16 01-MAR-84 +/-error:	7.70E+03	8.40E+00	
29-MAY-84 +/-error:	2.70E+04		3.70E+01	02-MAR-84 +/-error:	7.70E+03		
30-AUG-84 +/-error:	2.20E+04		1.70E+01	30-MAY-84 +/-error:	1.80E+03	8.20E+00	
20-DEC-84 +/-error:	2.60E+04		4.10E+01	28-AUG-84 +/-error:	3.30E+02	1.90E+01	
				21-DEC-84 +/-error:	3.50E+02		1.70E+01
5.00E+02							
1-N-14 01-MAR-84 +/-error:	3.30E+04	1.10E+01		1-N-17 01-MAR-84 +/-error:	2.10E+04	9.90E-02	
29-MAY-84 +/-error:	5.40E+04		2.30E+01	02-MAR-84 +/-error:	2.10E+04		
30-AUG-84 +/-error:	3.00E+04		3.80E+01	31-MAY-84 +/-error:	2.10E+04	1.60E+00	
20-DEC-84 +/-error:	2.20E+04		3.80E+01	29-AUG-84 +/-error:	2.00E+04	1.00E+00	
1-N-15 06-MAR-84 +/-error:	2.40E+04		2.90E+01	20-DEC-84 +/-error:	1.90E+04	2.10E+00	
30-MAY-84 +/-error:	2.70E+04		3.70E+01	1-N-18 01-MAR-84 +/-error:	3.00E+04	2.00E-02	
29-AUG-84 +/-error:	2.50E+04		3.70E+01				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 1 3 2 3 9 3 0

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-N-18 02-MAR-84 +/-error:	3.00E+04			1-N-20 29-AUG-84 +/-error:	2.60E+04		3.20E+01
31-MAY-84 +/-error:	2.60E+04		1.20E+00	20-DEC-84 +/-error:	2.30E+04		4.40E+01
29-AUG-84 +/-error:	2.10E+04		1.30E+00				
20-DEC-84 +/-error:	2.50E+04		1.50E+00	1-N-21 01-MAR-84 +/-error:	1.50E+04	1.50E+01	
				02-MAR-84 +/-error:	1.50E+04		
1-N-19 02-MAR-84 +/-error:	2.60E+04		3.20E+01	30-MAY-84 +/-error:	1.90E+04		2.00E+01
31-MAY-84 +/-error:	2.60E+04		2.20E+01	28-AUG-84 +/-error:	1.40E+04		2.10E+01
29-AUG-84 +/-error:	2.60E+04		3.10E+01	21-DEC-84 +/-error:	1.60E+04		3.40E+01
20-DEC-84 +/-error:	2.40E+04		1.20E+01				
				1-N-22 01-MAR-84 +/-error:	1.70E+04	1.30E+01	
1-N-20 01-MAR-84 +/-error:	2.70E+04	1.80E+01		02-MAR-84 +/-error:	1.70E+04		
02-MAR-84 +/-error:	2.70E+04			30-MAY-84 +/-error:	1.30E+04		1.40E+01
31-MAY-84 +/-error:	2.40E+04		2.90E+01	28-AUG-84 +/-error:	7.50E+03		1.70E+01

#-- PHENOL DISULFONIC ACID METHOD

@-- SPECIFIC NITRATE ION METHOD

#-- PHENOL DISULFONIC ACID METHOD

@-- SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 0 9 3 1

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-N-22 21-DEC-84 +/-error:	9.50E+03		2.70E+01	1-N-25 21-DEC-84 +/-error:	1.10E+03 5.10E+02		1.80E+01
1-N-23 01-MAR-84 +/-error:	1.90E+04	1.20E+01		1-N-26 01-MAR-84 +/-error:	4.80E+03 4.90E+02	2.00E+01	
02-MAR-84 +/-error:	1.90E+04			30-MAY-84 +/-error:	5.20E+02 4.40E+02		2.50E+01
30-MAY-84 +/-error:	1.20E+04		1.90E+01	28-AUG-84 +/-error:	-1.80E+02 4.60E+02		1.40E+01
28-AUG-84 +/-error:	5.30E+03		1.90E+01	1-N-27 01-MAR-84 +/-error:	2.10E+04	4.50E+01	
21-DEC-84 +/-error:	7.40E+03		2.50E+01	02-MAR-84 +/-error:	2.10E+04		
1-N-24 01-MAR-84 +/-error:	5.70E+02 4.40E+02	5.00E+00		29-MAY-84 +/-error:	2.60E+04		5.30E+01
02-MAR-84 +/-error:	5.70E+02 4.40E+02			30-AUG-84 +/-error:	2.50E+04		3.40E+01
30-MAY-84 +/-error:	9.10E+03		1.30E+01	20-DEC-84 +/-error:	2.00E+04		4.00E+01
28-AUG-84 +/-error:	8.50E+03		1.20E+01	1-N-28 01-MAR-84 +/-error:	2.50E+04	2.60E+01	
1-N-25 28-AUG-84 +/-error:	3.80E+03 5.10E+02		1.30E+01				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.9

9 2 | 2 3 3 2 1 9 3 2

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-N-28 02-MAR-84 +/-error:	2.50E+04			1-N-30 29-MAY-84 +/-error:	3.40E+04		8.90E+01
29-MAY-84 +/-error:	2.50E+04		4.30E+01	30-AUG-84 +/-error:	2.30E+04		6.40E+01
30-AUG-84 +/-error:	2.70E+04		2.80E+01	20-DEC-84 +/-error:	2.90E+04		6.50E+01
20-DEC-84 +/-error:	1.70E+04		2.30E+01				
1-N-29 01-MAR-84 +/-error:	1.60E+04	4.80E+01		1-N-31 01-MAR-84 +/-error:	2.30E+04	3.20E+01	
02-MAR-84 +/-error:	1.60E+04			02-MAR-84 +/-error:	2.30E+04		
29-MAY-84 +/-error:	2.00E+04		4.10E+01	29-MAY-84 +/-error:	2.70E+04		4.70E+01
30-AUG-84 +/-error:	3.20E+04		5.90E+01	30-AUG-84 +/-error:	2.30E+04		5.60E+01
20-DEC-84 +/-error:	1.60E+04		3.80E+01	20-DEC-84 +/-error:	2.80E+04		4.00E+01
1-N-30 01-MAR-84 +/-error:	1.20E+04	2.20E+01		1-N-32 01-MAR-84 +/-error:		2.50E+01	
02-MAR-84 +/-error:	1.20E+04			02-MAR-84 +/-error:	1.60E+04		
				29-MAY-84 +/-error:	3.00E+04		5.50E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 0 9 3 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
1-N-32 30-AUG-84 +/-error:	2.30E+04		5.50E+01	1-N-34 02-MAR-84 +/-error:	2.80E+04		
20-DEC-84 +/-error:	2.70E+04		6.10E+01	29-MAY-84 +/-error:	2.70E+04		4.60E+01
				30-AUG-84 +/-error:	2.50E+04		4.10E+01
1-N-33 23-FEB-84 +/-error:	2.00E+04	1.30E+01		20-DEC-84 +/-error:	2.80E+04		3.30E+01
01-MAR-84 +/-error:	2.20E+04	2.00E+01		2-E19-1 03-FEB-84 +/-error:	3.40E+02	2.40E-01	
25-MAY-84 +/-error:	2.00E+04			24-APR-84 +/-error:	4.40E+02		
29-MAY-84 +/-error:	3.10E+04		4.20E+01	24-APR-84 +/-error:	-8.70E+00		2.20E+00
30-AUG-84 +/-error:	2.70E+04		3.40E+01	09-JUL-84 +/-error:	4.50E+02		
20-SEP-84 +/-error:	1.80E+04		2.40E+01	09-JUL-84 +/-error:	-7.30E+01		5.10E+00
14-DEC-84 +/-error:	2.10E+04		2.60E+01	24-OCT-84 +/-error:	4.50E+02		5.30E+00
20-DEC-84 +/-error:	2.20E+04		3.30E+01	24-OCT-84 +/-error:	4.90E+02		
1-N-34 01-MAR-84 +/-error:	2.80E+04	1.90E+01		2-E23-1 03-FEB-84 +/-error:	3.20E+03	1.30E+01	
				24-APR-84 +/-error:	4.80E+02		
				24-APR-84 +/-error:	1.90E+03		1.40E+01
				02-JUL-84 +/-error:	4.70E+02		
				02-JUL-84 +/-error:	2.50E+03		1.50E+01
				02-JUL-84 +/-error:	4.90E+02		

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 1 3 2 1 9 3 4

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
2-E23-1 24-OCT-84 +/-error:	8.20E+03		2.00E+01	2-E26-1 03-MAY-84 +/-error:	1.80E+02 4.40E+02		1.20E+00
				05-JUL-84 +/-error:	2.00E+02 4.50E+02		7.30E-01
2-E24-7 03-FEB-84 +/-error:	4.00E+03 4.90E+02	1.60E+01		24-OCT-84 +/-error:	9.00E+02 4.90E+02		1.60E+00
24-APR-84 +/-error:	3.80E+03 4.90E+02		2.50E+01	2-E26-3 07-FEB-84 +/-error:	2.10E+04	7.30E+00	
05-JUL-84 +/-error:	2.60E+03 4.90E+02		1.40E+01	03-MAY-84 +/-error:	2.50E+04		1.10E+01
24-OCT-84 +/-error:	5.80E+03		2.70E+01	06-JUL-84 +/-error:	2.60E+04		8.70E+00
2-E25-2 07-FEB-84 +/-error:	4.10E+04	4.10E+00		24-OCT-84 +/-error:	1.60E+04		9.20E+00
03-MAY-84 +/-error:	2.85E+04 2.50E+03	3.40E+00	1.20E+01	2-E27-1 03-FEB-84 +/-error:	9.10E+03	5.90E+00	
06-JUL-84 +/-error:	3.50E+04		7.20E+00	24-APR-84 +/-error:	8.60E+03 5.40E+02		1.40E+01
24-OCT-84 +/-error:	1.36E+05 4.73E+03	4.26E+00	1.00E+01	05-JUL-84 +/-error:	1.20E+04		1.20E+01
2-E26-1 03-FEB-84 +/-error:	4.50E+02 4.40E+02	9.60E-02		24-OCT-84 +/-error:	7.80E+03		9.20E+00

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 1 9 3 5

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
2-E28-1 03-FEB-84 +/-error:	7.50E+02 4.50E+02	1.20E+01		2-E33-14 24-OCT-84 +/-error:	6.80E+02 4.90E+02		3.70E+01
02-MAY-84 +/-error:	2.70E+03 4.80E+02		1.80E+02				
02-JUL-84 +/-error:	1.60E+03 4.80E+02		2.40E+01	2-E34-1 09-JAN-84 +/-error:	1.30E+03 3.89E+02	9.40E+00	
24-OCT-84 +/-error:	5.30E+03 5.40E+02		2.00E+01	03-FEB-84 +/-error:	5.48E+02 2.09E+02	1.10E+01	
				08-MAR-84 +/-error:	5.76E+03 5.11E+02		2.10E+01
2-E28-5 03-FEB-84 +/-error:	8.10E+02 4.50E+02	8.50E+00		04-APR-84 +/-error:	1.53E+03 3.81E+02		1.40E+01
03-MAY-84 +/-error:	-1.10E+02 4.40E+02		1.70E+01	02-MAY-84 +/-error:	3.81E+02 3.39E+02		2.10E+01
02-JUL-84 +/-error:	3.60E+02 4.60E+02		1.30E+01	17-MAY-84 +/-error:	1.33E+03 3.96E+02		2.40E+01
24-OCT-84 +/-error:	1.10E+03 5.00E+02		1.50E+01	11-JUN-84 +/-error:	5.86E+02 3.70E+02		1.90E+01
				05-JUL-84 +/-error:	5.92E+02 3.61E+02		1.70E+01
2-E33-14 03-FEB-84 +/-error:	7.10E+02 4.50E+02	2.80E+01		06-AUG-84 +/-error:	2.70E+04 2.54E+03		1.50E+01
03-MAY-84 +/-error:	-3.40E+01 4.40E+02		4.20E+01	06-SEP-84 +/-error:	7.89E+02 3.08E+02		2.10E+01
05-JUL-84 +/-error:	7.80E+01 4.50E+02		3.70E+01	09-OCT-84 +/-error:	5.78E+02 3.58E+02		2.00E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.13

9 2 1 2 1 3 2 1 9 3 6

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
2-E34-1 06-NOV-84 +/-error:	3.20E+02 1.97E+02		2.00E+01	2-W11-9 25-APR-84 +/-error:	1.60E+03 4.70E+02		7.70E+01
05-DEC-84 +/-error:	3.15E+02 2.24E+02		1.90E+01	09-JUL-84 +/-error:	1.60E+03 4.30E+02		1.40E+00
				25-OCT-84 +/-error:	2.00E+03 5.10E+02		1.10E+00
2-W6-1 30-JAN-84 +/-error:	3.90E+04	1.50E+02		2-W12-1 30-JAN-84 +/-error:	2.00E+03 4.60E+02	2.90E+02	
27-APR-84 +/-error:	4.10E+04		1.80E+02	27-APR-84 +/-error:	2.10E+03 4.70E+02		3.20E+02
09-JUL-84 +/-error:	3.60E+04		1.90E+02	09-JUL-84 +/-error:	1.50E+03 4.30E+02		2.95E+02
25-OCT-84 +/-error:	3.90E+04		1.50E+02	25-OCT-84 +/-error:	2.20E+03 5.10E+02		2.60E+02
2-W10-5 30-JAN-84 +/-error:	1.60E+04	8.40E+01		2-W15-2 30-JAN-84 +/-error:	6.30E+02 4.50E+02	7.50E+00	
27-APR-84 +/-error:	1.50E+04		1.20E+02	27-APR-84 +/-error:	6.30E+02 4.50E+02		1.30E+01
09-JUL-84 +/-error:	1.30E+04		1.30E+02	18-JUL-84 +/-error:	7.71E+02 3.67E+02	-1.00E+37	
25-OCT-84 +/-error:	1.40E+04		1.00E+02	25-OCT-84 +/-error:	5.10E+04		1.00E+01
2-W11-9 30-JAN-84 +/-error:	1.90E+03 4.60E+02	5.80E+00					

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.14

9 2 1 2 5 3 2 0 9 3 7

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
2-W18-3 26-JAN-84 +/-error:	3.20E+02 4.40E+02	8.40E-01		2-W22-7 01-MAY-84 +/-error:	3.40E+05		1.40E+00
27-APR-84 +/-error:	1.40E+02 4.50E+02		3.10E+00	09-JUL-84 +/-error:	3.20E+05		7.50E-01
09-JUL-84 +/-error:	3.10E+02 4.10E+02		3.00E+00	25-OCT-84 +/-error:	4.30E+05		2.30E+00
25-OCT-84 +/-error:	1.00E+03 4.90E+02		3.50E+00	2-W22-9 26-JAN-84 +/-error:	9.70E+06	2.20E-01	
2-W19-4 30-JAN-84 +/-error:	1.30E+03 4.50E+02	8.00E+00		01-MAY-84 +/-error:	9.30E+06		1.70E+00
				09-JUL-84 +/-error:	8.10E+06		1.40E+00
2-W21-1 30-JAN-84 +/-error:	3.80E+05	3.30E+01		25-OCT-84 +/-error:	8.00E+06		1.50E+00
27-APR-84 +/-error:	3.30E+05		5.20E+01	3-1-1 23-MAR-84 +/-error:			2.90E+01
09-JUL-84 +/-error:	2.60E+05		5.40E+01	04-JUN-84 +/-error:			4.00E+01
25-OCT-84 +/-error:	2.40E+05		5.30E+01	26-SEP-84 +/-error:			1.70E+01
2-W22-7 30-JAN-84 +/-error:	3.90E+05	1.40E-01		28-DEC-84 +/-error:			4.20E+01

<sup>#</sup>-- PHENOL DISULFONIC ACID METHOD<sup>@</sup>-- SPECIFIC NITRATE ION METHOD<sup>#</sup>-- PHENOL DISULFONIC ACID METHOD<sup>@</sup>-- SPECIFIC NITRATE ION METHOD

9 2 | 2 : 3 2 ) 9 ) 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
3-1-2 29-MAR-84 +/-error:			3.40E+01	3-1-5 06-FEB-84 +/-error:			2.30E+01
28-JUN-84 +/-error:			3.50E+01	13-APR-84 +/-error:			3.40E+01
26-SEP-84 +/-error:			1.80E+01	20-JUL-84 +/-error:			2.40E+01
28-DEC-84 +/-error:			3.90E+01	12-OCT-84 +/-error:			3.60E+01
3-1-3 23-MAR-84 +/-error:			3.00E+01	3-1-6 23-MAR-84 +/-error:			3.10E+01
04-JUN-84 +/-error:			4.50E+01	29-JUN-84 +/-error:			2.70E+01
24-SEP-84 +/-error:			1.90E+01	26-SEP-84 +/-error:			3.10E+01
				28-DEC-84 +/-error:			2.60E+01
3-1-4 23-MAR-84 +/-error:			3.60E+01	3-2-1 23-MAR-84 +/-error:			3.40E+01
29-JUN-84 +/-error:			2.60E+01	25-JUL-84 +/-error:			3.50E+01
26-SEP-84 +/-error:			1.50E+01	24-SEP-84 +/-error:			2.00E+01
28-DEC-84 +/-error:			4.80E+01				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 2 0 9 3 9

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
3-2-2 23-MAR-84 +/-error:		3.40E+01		3-3-2 04-JUN-84 +/-error:			1.10E+01
29-JUN-84 +/-error:		3.80E+01		26-SEP-84 +/-error:			1.30E+01
24-SEP-84 +/-error:		2.10E+01		21-DEC-84 +/-error:			1.50E+01
3-2-3 29-MAR-84 +/-error:		3.20E+01		3-3-3 05-APR-84 +/-error:			1.10E+01
04-JUN-84 +/-error:		2.00E+01		04-JUN-84 +/-error:			1.30E+01
12-OCT-84 +/-error:		2.70E+01		12-OCT-84 +/-error:			1.20E+01
				28-DEC-84 +/-error:			1.20E+01
3-3-1 23-MAR-84 +/-error:		2.10E+01		3-3-6 29-MAR-84 +/-error:			1.90E+01
04-JUN-84 +/-error:		2.40E+01		04-JUN-84 +/-error:			1.70E+01
24-SEP-84 +/-error:		1.20E+01		12-OCT-84 +/-error:			1.80E+01
3-3-2 29-MAR-84 +/-error:		1.30E+01		21-DEC-84 +/-error:			2.00E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.17

9 2 1 2 1 3 2 0 9 9 0

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
3-3-7 05-APR-84 +/-error:		1.80E+01		3-3-10 28-DEC-84 +/-error:		2.00E+01	
23-JUL-84 +/-error:		2.90E+01		3-3-11 06-FEB-84 +/-error:		1.80E+01	
12-OCT-84 +/-error:		1.80E+01		13-APR-84 +/-error:		2.90E+01	
21-DEC-84 +/-error:		2.10E+01		12-OCT-84 +/-error:		2.00E+01	
3-3-9 06-FEB-84 +/-error:	1.70E+01			3-3-12 23-MAR-84 +/-error:		2.90E+01	
13-APR-84 +/-error:		2.60E+01		12-OCT-84 +/-error:		2.20E+01	
23-JUL-84 +/-error:		2.80E+01		28-DEC-84 +/-error:		3.00E+01	
12-OCT-84 +/-error:		2.30E+01					
3-3-10 23-MAR-84 +/-error:		2.60E+01		3-4-1 05-APR-84 +/-error:		1.40E+01	
04-JUN-84 +/-error:		2.90E+01		04-JUN-84 +/-error:		1.80E+01	
12-OCT-84 +/-error:		1.70E+01		28-DEC-84 +/-error:		1.90E+01	

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 2 0 9 9 1

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
3-4-7 23-MAR-84 +/-error:			2.80E+01	3-4-10 28-DEC-84 +/-error:			3.10E+01
04-JUN-84 +/-error:			3.30E+01				
12-OCT-84 +/-error:			2.70E+01	3-5-1 05-APR-84 +/-error:			4.90E+01
28-DEC-84 +/-error:			2.60E+01	29-JUN-84 +/-error:			3.90E+01
				12-OCT-84 +/-error:			4.30E+01
3-4-9 06-FEB-84 +/-error:	1.10E+01			28-DEC-84 +/-error:			5.90E+01
13-APR-84 +/-error:			3.20E+01				
19-JUL-84 +/-error:			3.40E+01	3-6-1 29-MAR-84 +/-error:			2.90E+01
12-OCT-84 +/-error:			2.40E+01	29-JUN-84 +/-error:			3.30E+01
				12-OCT-84 +/-error:			3.30E+01
3-4-10 23-MAR-84 +/-error:			3.20E+01	28-DEC-84 +/-error:			4.10E+01
04-JUN-84 +/-error:			4.00E+01				
12-OCT-84 +/-error:			2.90E+01	3-8-1 29-MAR-84 +/-error:			1.50E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.19

9 2 1 2 3 3 2 0 9 3 2

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
3-8-1 29-JUN-84 +/-error:		1.50E+01		3-8-4 13-APR-84 +/-error:			2.20E+01
26-SEP-84 +/-error:		1.80E+01		23-JUL-84 +/-error:			2.60E+01
				12-OCT-84 +/-error:			2.60E+01
3-8-2 29-MAR-84 +/-error:		1.70E+01		4-SL-7B 11-JAN-84 +/-error:	6.80E+04	1.70E-01	
29-JUN-84 +/-error:		1.80E+01		12-APR-84 +/-error:	6.90E+04	8.00E-01	
12-OCT-84 +/-error:		1.90E+01		23-JUL-84 +/-error:	6.90E+04	9.70E+00	
28-DEC-84 +/-error:		2.50E+01		16-OCT-84 +/-error:			1.70E+00
3-8-3 29-MAR-84 +/-error:		1.40E+01		17-OCT-84 +/-error:	6.50E+04		
15-JUN-84 +/-error:		1.50E+01		4-SL-7C 11-JAN-84 +/-error:			2.10E+01
26-SEP-84 +/-error:		1.40E+01		12-APR-84 +/-error:	9.50E+04	4.20E+01	
28-DEC-84 +/-error:		1.90E+01		23-JUL-84 +/-error:	9.40E+04	4.00E+01	
3-8-4 06-FEB-84 +/-error:	1.30E+01						

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 : 9 2 0 9 9 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
4-SI-7C 16-OCT-84 +/-error:	8.80E+04		4.40E+01	4-SO-7 12-APR-84 +/-error:	3.20E+04		8.00E+00
				23-JUL-84 +/-error:	2.20E+04		4.70E+00
4-SI-8A 11-JAN-84 +/-error:		1.70E+01		16-OCT-84 +/-error:	3.40E+04		1.10E+01
12-APR-84 +/-error:	1.00E+05		3.70E+01	4-SO-8 11-JAN-84 +/-error:	6.60E+04	6.60E+00	
23-JUL-84 +/-error:	1.10E+05		3.80E+01	12-APR-84 +/-error:	4.10E+04		1.00E+01
16-OCT-84 +/-error:	1.00E+05		4.40E+01	23-JUL-84 +/-error:	7.90E+04		2.40E+01
4-SI-8B 11-JAN-84 +/-error:		2.00E+01		16-OCT-84 +/-error:	8.90E+04		3.00E+01
12-APR-84 +/-error:		3.70E+01		6-S3-25 17-MAR-84 +/-error:	-1.30E+02		1.40E+00
20-JUL-84 +/-error:		4.00E+01		19-MAR-84 +/-error:	4.40E+02		
16-OCT-84 +/-error:		4.40E+01		29-JUN-84 +/-error:	-1.30E+02		1.60E+00
4-SO-7 11-JAN-84 +/-error:	3.50E+04	2.40E+00		28-SEP-84 +/-error:	4.40E+02		1.70E+00

#-- PHENOL DISULFONIC ACID METHOD

@-- SPECIFIC NITRATE ION METHOD

#-- PHENOL DISULFONIC ACID METHOD

@-- SPECIFIC NITRATE ION METHOD

9 2 1 2 4 3 2 1 9 7 1

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-S3-E12 15-MAR-84 +/-error:	1.50E+03 4.60E+02		2.80E+00	6-S6E14A 27-JUN-84 +/-error:	-3.60E+02 4.30E+02		7.30E+00
27-JUN-84 +/-error:	2.50E+03 4.70E+02		2.00E+01	22-SEP-84 +/-error:	1.90E+02 5.20E+02		9.40E+00
22-SEP-84 +/-error:	2.40E+03 5.40E+02		2.50E+01	6-S7-34 16-JAN-84 +/-error:	-1.70E+01 4.50E+02	5.40E-01	
6-S6-E4B 15-MAR-84 +/-error:	2.00E+04		2.20E+01	17-APR-84 +/-error:	-4.90E+01 4.50E+02		1.40E+00
27-JUN-84 +/-error:	2.10E+04		1.90E+01	16-AUG-84 +/-error:	2.50E+02 4.50E+02		3.50E+00
22-SEP-84 +/-error:	1.80E+04		2.00E+01	20-NOV-84 +/-error:	4.30E+02 5.10E+02		1.70E+00
6-S6-E4D 15-MAR-84 +/-error:	3.20E+04		3.00E+01	6-S8-19 17-MAR-84 +/-error:	8.00E+01 4.40E+02		6.70E+00
27-JUN-84 +/-error:	3.40E+04		2.70E+01	19-MAR-84 +/-error:	8.00E+01 4.40E+02		
22-SEP-84 +/-error:	2.60E+04		3.40E+01	29-JUN-84 +/-error:	-1.20E+02 4.50E+02		8.10E+00
				28-SEP-84 +/-error:	-2.90E+02 4.90E+02		8.30E+00
6-S6E14A 15-MAR-84 +/-error:	-2.90E+02 4.40E+02		8.60E+00	6-S11E12A 15-MAR-84 +/-error:	2.80E+02 4.50E+02		2.80E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.22

9 2 1 2 5 3 2 0 9 9 5

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-S11E12A 27-JUN-84 +/-error:	-8.50E+01 4.40E+02		1.10E+00	6-S12-29 16-AUG-84 +/-error:			2.10E+01
22-SEP-84 +/-error:	3.90E+02 5.20E+02		1.10E+00	20-NOV-84 +/-error:			2.50E+01
6-S11E12AP 15-MAR-84 +/-error:	-1.10E+02 4.40E+02		4.60E-01	6-S14-20A 17-MAR-84 +/-error:			3.70E+00
27-JUN-84 +/-error:	9.30E+02 4.50E+02		2.50E+01	29-JUN-84 +/-error:			5.20E+00
22-SEP-84 +/-error:	1.10E+03 5.30E+02		3.10E+01	28-SEP-84 +/-error:			5.00E+00
6-S12-3 15-MAR-84 +/-error:	-3.40E+02 4.40E+02		1.40E+01	6-S18-51 21-FEB-84 +/-error:			3.00E-01
27-JUN-84 +/-error:	-1.70E+02 4.40E+02		1.10E+01	01-JUN-84 +/-error:			5.40E+00
22-SEP-84 +/-error:	3.60E+02 5.20E+02		1.20E+01	21-SEP-84 +/-error:			1.30E+01
				18-DEC-84 +/-error:			5.90E+00
6-S12-29 16-JAN-84 +/-error:		1.40E+00		6-S19-11 27-JUN-84 +/-error:			1.10E+01
17-APR-84 +/-error:			2.20E+01				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.23

9 2 1 2 1 3 2 0 9 9 6

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-S19-E13 15-MAR-84 +/-error:		2.30E+01		6-S27-E14 19-NOV-84 +/-error:	9.20E+02 5.10E+02	2.80E+01	
27-JUN-84 +/-error:		2.00E+01		21-DEC-84 +/-error:		3.10E+01	
22-SEP-84 +/-error:		2.30E+01		6-S28-E0 15-MAR-84 +/-error:	-3.30E+02 4.40E+02	1.10E+01	
6-S27-E14 06-FEB-84 +/-error:	1.70E+01			6-S29-E12 15-MAR-84 +/-error:		2.60E+01	
14-MAR-84 +/-error:		3.00E+01		27-JUN-84 +/-error:		2.10E+01	
05-APR-84 +/-error:		2.70E+01		23-SEP-84 +/-error:		2.50E+01	
13-APR-84 +/-error:	1.50E+01	2.80E+01					
01-JUN-84 +/-error:	1.70E+00	3.40E+01		6-S30E15A 15-MAR-84 +/-error:		2.30E+01	
21-JUN-84 +/-error:		2.70E+01		27-JUN-84 +/-error:		1.70E+01	
10-AUG-84 +/-error:		3.30E+01		22-SEP-84 +/-error:		1.80E+01	
12-SEP-84 +/-error:		2.70E+01					
08-OCT-84 +/-error:		2.80E+01		6-S31-1P 13-APR-84 +/-error:	7.20E+01 4.50E+02	4.50E+00	

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.24

9 2 1 2 3 2 0 9 9 7

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-S31-1P 29-JUN-84 +/-error:	-1.90E+02 4.50E+02		4.40E+00	6-2-3 15-JUN-84 +/-error:	1.20E+05	2.90E+01	3.60E+01
28-SEP-84 +/-error:	-2.50E+02 4.90E+02		4.90E+00	17-JUL-84 +/-error:	1.20E+05		2.70E+01
				10-AUG-84 +/-error:	1.20E+05		4.20E+01
6-1-18 17-MAR-84 +/-error:	7.40E+04		2.60E+01	11-SEP-84 +/-error:	1.20E+05		
19-MAR-84 +/-error:	7.40E+04			08-OCT-84 +/-error:	1.10E+05		4.30E+01
29-JUN-84 +/-error:	7.50E+04		2.80E+01	19-NOV-84 +/-error:	1.20E+05		4.00E+01
28-SEP-84 +/-error:	7.00E+04		2.90E+01	13-DEC-84 +/-error:	1.20E+05		4.90E+01
6-2-3 20-JAN-84 +/-error:	1.20E+05	2.70E+01		6-2-33A 17-MAR-84 +/-error:	1.40E+02 4.50E+02		4.00E+00
28-FEB-84 +/-error:	1.10E+05	2.40E+01	5.00E+01	19-MAR-84 +/-error:	1.40E+02 4.50E+02		
16-MAR-84 +/-error:	1.10E+05		4.30E+01	26-JUL-84 +/-error:	3.60E+02 4.50E+02		3.90E+00
18-APR-84 +/-error:	1.20E+05		4.20E+00	29-SEP-84 +/-error:	-2.10E+02 4.90E+02		4.20E+00
10-MAY-84 +/-error:	1.20E+05	2.60E+01	3.30E+01	6-3-45 16-JAN-84 +/-error:		8.90E-01	

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 0 9 3 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-3-45 17-APR-84 +/-error:	-8.70E+02 4.50E+02		1.60E+01	6-8-25 19-MAR-84 +/-error:	5.10E+04		
16-AUG-84 +/-error:			1.70E+01	26-JUL-84 +/-error:	5.20E+04		2.50E+01
20-NOV-84 +/-error:	7.00E+01 5.00E+02		1.90E+01	28-SEP-84 +/-error:	5.00E+04		2.50E+01
6-4-E6 15-MAR-84 +/-error:	-1.00E+02 4.40E+02		1.70E+01	6-8-32 17-MAR-84 +/-error:	-2.40E+02 4.40E+02		7.20E+00
27-JUN-84 +/-error:	8.50E+00 4.40E+02		1.50E+01	19-MAR-84 +/-error:	-2.40E+02 4.40E+02		
15-OCT-84 +/-error:	-6.60E+01 4.80E+02		1.70E+01	26-JUL-84 +/-error:	-2.50E+02 4.50E+02		7.50E+00
				29-SEP-84 +/-error:	-3.60E+02 4.90E+02		7.90E+00
6-8-17 17-MAR-84 +/-error:	1.60E+05		3.70E+01	6-9-E2 20-MAR-84 +/-error:	-1.90E+02 4.40E+02		1.30E+00
19-MAR-84 +/-error:	1.60E+05			27-JUN-84 +/-error:	1.50E+02 4.40E+02		7.70E+00
24-JUL-84 +/-error:	1.70E+05		4.70E+01	27-SEP-84 +/-error:	-2.70E+02 4.90E+02		7.90E+00
28-SEP-84 +/-error:	1.50E+05		3.80E+01				
6-8-25 17-MAR-84 +/-error:	5.10E+04		2.50E+01	6-10-E12 22-MAR-84 +/-error:	9.60E+03		2.80E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.26

9 2 | 2 5 3 2 0 9 9 9

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-10-E12 27-JUN-84 +/-error:	1.10E+04		2.30E+01	6-14-38 26-JUN-84 +/-error:	-3.60E+02 4.30E+02		4.70E+00
16-OCT-84 +/-error:	1.10E+04		3.00E+01	15-OCT-84 +/-error:	1.40E+02 4.80E+02		5.10E+00
6-12-4B 27-NOV-84 +/-error:	6.70E+02 4.90E+02			6-14-47 20-MAR-84 +/-error:	3.40E+01 4.40E+02		1.20E+00
6-13-64 16-JAN-84 +/-error:	-1.00E+02 4.40E+02	1.10E+00		26-JUN-84 +/-error:	1.00E+02 4.40E+02		1.30E+00
17-APR-84 +/-error:	-2.40E+02 4.40E+02		1.50E+00	15-OCT-84 +/-error:	7.20E+01 4.80E+02		1.90E+00
16-AUG-84 +/-error:	1.00E+02 4.50E+02		1.10E+00	31-DEC-84 +/-error:	-2.00E+01 5.20E+02		1.70E+00
20-NOV-84 +/-error:	-6.10E+01 5.00E+02		2.60E+00	6-15-15B 17-MAR-84 +/-error:	-3.00E+02 4.40E+02		3.00E+01
6-14-E6T 06-JAN-84 +/-error:	3.40E+04	1.50E+01		25-JUN-84 +/-error:	-3.10E+01 4.40E+02		2.70E+01
30-SEP-84 +/-error:	3.80E+04		2.80E+01	23-SEP-84 +/-error:	-4.60E+02 5.00E+02		3.50E+01
6-14-38 16-MAR-84 +/-error:	-1.80E+02 4.40E+02		6.20E+00	6-15-26 17-MAR-84 +/-error:	1.20E+05		3.10E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B-27

9 2 1 2 5 3 2 1 0 0 0

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-15-26 24-JUL-84 +/-error:	1.20E+05		3.30E+01	6-19-43 26-JUN-84 +/-error:	-1.60E+02 4.40E+02		1.30E+01
16-OCT-84 +/-error:	1.00E+05		3.50E+01	23-SEP-84 +/-error:	3.30E+02 5.20E+02		1.40E+01
31-DEC-84 +/-error:	9.40E+04		4.10E+01				
				6-19-58 16-MAR-84 +/-error:			1.10E+00
6-17-5 20-MAR-84 +/-error:	-2.20E+02 4.20E+02		6.70E+01	26-JUN-84 +/-error:			6.50E-01
21-JUN-84 +/-error:	8.30E+01 4.40E+02		7.90E+01	23-SEP-84 +/-error:			7.20E-01
27-SEP-84 +/-error:	-3.00E+02 4.90E+02		8.10E+01				
				6-19-88 16-JAN-84 +/-error:		1.20E+00	
6-17-70 16-JAN-84 +/-error:	-9.90E+01 4.40E+02	3.30E+01		17-APR-84 +/-error:			3.20E+00
17-APR-84 +/-error:	-4.90E+01 4.50E+02		5.70E+01	16-AUG-84 +/-error:			4.20E+00
16-AUG-84 +/-error:	1.70E+02 4.50E+02		5.90E+01	20-NOV-84 +/-error:			4.50E+00
20-NOV-84 +/-error:	5.60E+01 5.00E+02		6.10E+00				
				6-20-ESA 30-MAR-84 +/-error:	3.80E+04		2.20E+01
6-19-43 16-MAR-84 +/-error:	9.30E+01 4.40E+02		1.70E+01				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 2 1 0 0 1

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>€</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>€</sup> (MG/L)
6-20-ESA 28-JUN-84 +/-error:	4.00E+04		2.20E+01	6-20-E12P 30-MAR-84 +/-error:	-1.50E+02		1.00E+00
30-SEP-84 +/-error:	3.70E+04		2.60E+01	28-JUN-84 +/-error:	-1.40E+02		2.10E+01
				30-SEP-84 +/-error:	-2.80E+02		1.80E+00
6-20-E5AP 06-JAN-84 +/-error:	-1.20E+02 4.30E+02	2.30E-01		6-20-20 17-MAR-84 +/-error:	3.40E+05		4.80E+01
30-MAR-84 +/-error:	-1.10E+02 4.40E+02		6.80E-01	24-JUL-84 +/-error:	3.40E+05		7.40E+01
28-JUN-84 +/-error:	0.00E+00 4.50E+02		7.10E-01	30-SEP-84 +/-error:	3.20E+05		5.20E+01
30-SEP-84 +/-error:	5.60E+01 4.90E+02		9.40E-01				
6-20-E5AQ 06-JAN-84 +/-error:	-3.30E+02 4.30E+02	2.50E-01		6-20-39 16-MAR-84 +/-error:	-4.70E+02 4.40E+02		4.20E+00
30-MAR-84 +/-error:	1.20E+02 4.50E+02		5.50E-01	26-JUN-84 +/-error:	-3.00E+02 4.40E+02		3.40E+00
28-JUN-84 +/-error:	-1.50E+02 4.50E+02		6.00E-01	23-SEP-84 +/-error:	-3.50E+02 5.00E+02		5.20E+00
30-SEP-84 +/-error:	-1.90E+02 4.90E+02		9.40E-01	6-20-82 16-JAN-84 +/-error:	1.60E+02 4.50E+02	1.50E+01	
6-20-ESAR 06-JAN-84 +/-error:	-2.50E+02 4.30E+02	2.00E+00					

<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>€</sup>— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

€— SPECIFIC NITRATE ION METHOD

B.2.29

9 2 1 2 1 3 2 1 0 1 2

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-20-82				6-21-6			
17-APR-84	1.20E+02		2.60E+01	10-OCT-84	5.80E+04		3.10E+01
+/-error:	4.50E+02			+/-error:			
16-AUG-84	2.30E+02		2.70E+01	15-NOV-84	5.00E+04		3.30E+01
+/-error:	4.50E+02			+/-error:			
20-NOV-84	7.20E+01		2.90E+01	13-DEC-84	6.00E+04		3.80E+01
+/-error:	5.00E+02			+/-error:			
6-21-6				6-22-70			
20-JAN-84	5.60E+04	3.40E+01		20-JAN-84	-2.60E+02	8.90E+00	
+/-error:				+/-error:	4.40E+02		
17-FEB-84	5.50E+04	3.60E+01		17-APR-84	-1.90E+02		1.60E+01
+/-error:				+/-error:	4.40E+02		
20-MAR-84	5.80E+04		4.90E+01	01-NOV-84	1.10E+03		1.90E+01
+/-error:				+/-error:	5.00E+02		
18-APR-84	6.10E+04		5.30E+01	6-24-1P			
+/-error:				06-JAN-84	-3.30E+02	9.40E-02	
05-JUN-84	5.80E+04		4.90E+01	+/-error:	4.30E+02		
+/-error:				30-MAR-84	1.20E+02		6.60E-01
15-JUN-84	6.90E+04	3.00E+01	4.70E+01	+/-error:	4.40E+02		
+/-error:				22-JUN-84	-3.30E+02		6.40E-01
17-JUL-84	6.40E+04		3.00E+01	+/-error:	4.30E+02		
+/-error:				30-SEP-84	-2.80E+02		8.40E-01
09-AUG-84	6.20E+04		3.20E+01	+/-error:	4.90E+02		
+/-error:				6-24-10			
11-SEP-84	6.00E+04			06-JAN-84	-3.50E+02	9.40E-02	
+/-error:				+/-error:	4.30E+02		

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 2 1 0 0 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-24-1Q 30-MAR-84 +/-error:	-4.50E+01 4.40E+02		6.70E+00	6-24-1T 29-JUN-84 +/-error:	-2.00E+02 4.50E+02		1.60E+01
22-JUN-84 +/-error:	8.50E+01 4.40E+02		7.60E-01	28-SEP-84 +/-error:	-3.20E+01 4.90E+02		2.10E+01
30-SEP-84 +/-error:	-4.10E+02 4.90E+02		1.30E+00	30-SEP-84 +/-error:	9.40E+03		5.30E+00
6-24-1R 06-JAN-84 +/-error:	-1.30E+02 4.30E+02	2.30E-01		6-24-33 16-MAR-84 +/-error:	4.00E+04		3.00E+01
30-MAR-84 +/-error:	2.00E+02 4.50E+02		5.70E+00	30-JUL-84 +/-error:	4.20E+04		2.50E+01
22-JUN-84 +/-error:	-7.40E+01 4.40E+02		4.00E-01	16-OCT-84 +/-error:	3.90E+04		2.60E+01
30-SEP-84 +/-error:	-3.70E+02 4.90E+02		6.80E-01	6-24-46 16-MAR-84 +/-error:	1.10E+02 4.40E+02		5.30E+00
6-24-1S 06-JAN-84 +/-error:	-1.10E+02 4.30E+02	1.90E-01		26-JUN-84 +/-error:	-2.10E+02 4.40E+02		4.80E+00
30-MAR-84 +/-error:	0.00E+00 4.40E+02		8.10E+00	23-SEP-84 +/-error:	-1.30E+02 5.10E+02		6.60E+00
22-JUN-84 +/-error:	1.20E+02 4.40E+02		6.50E-01	6-25-55 16-MAR-84 +/-error:	-2.60E+02 4.40E+02		2.50E+01
6-24-1T 06-JAN-84 +/-error:	7.20E+03	3.80E-01					

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.31

9 2 1 2 1 3 2 1 0 0 4

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-25-55 26-JUN-84 +/-error:	-3.70E+02 4.30E+02		1.70E+01	6-27-8 21-JUN-84 +/-error:	5.60E+05		5.60E+01
15-OCT-84 +/-error:	4.90E+02 4.90E+02		2.30E+01	27-SEP-84 +/-error:	5.60E+05		5.90E+01
6-25-70 26-JUN-84 +/-error:	1.20E+03 4.60E+02		1.90E+01	6-28-40 06-JAN-84 +/-error:	1.10E+04	7.90E+00	
11-DEC-84 +/-error:	1.20E+03 4.90E+02		2.30E+01	30-MAR-84 +/-error:	1.20E+04		1.50E+01
				28-JUN-84 +/-error:	1.30E+04		1.60E+01
6-26-15A 21-MAR-84 +/-error:	4.80E+05		4.50E+01	30-SEP-84 +/-error:	1.20E+04		1.70E+01
21-JUN-84 +/-error:	4.60E+05	4.10E+01	5.00E+01				
25-SEP-84 +/-error:	4.40E+05		5.60E+01	6-28-40P 06-JAN-84 +/-error:	-5.40E+01 4.30E+02	1.90E-01	
				30-MAR-84 +/-error:	-1.40E+01		6.20E-01
6-26-89 01-JUN-84 +/-error:			7.20E+00	28-JUN-84 +/-error:	1.70E+02 4.50E+02		7.80E-01
17-DEC-84 +/-error:			9.50E-01	30-SEP-84 +/-error:	-3.20E+02 4.90E+02		8.80E-01
6-27-8 20-MAR-84 +/-error:	5.70E+05		5.40E+01	6-28-52A 06-APR-84 +/-error:	0.00E+00 4.50E+02		1.40E+00

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 2 1 0 0 5

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-28-52A 26-JUN-84 +/-error:	-3.40E+01 4.40E+02		5.70E-01	6-29-4 10-OCT-84 +/-error:	1.10E+05		3.80E+01
15-OCT-84 +/-error:	1.20E+02 4.80E+02		1.20E+00	13-DEC-84 +/-error:	1.20E+05		4.10E+01
6-29-4 06-JAN-84 +/-error:	1.00E+05	2.20E+01		6-29-78 20-JAN-84 +/-error:	1.70E+02 4.40E+02	4.10E+00	
20-JAN-84 +/-error:	1.00E+05	2.10E+01		17-APR-84 +/-error:	5.70E+02 4.50E+02		1.00E+01
17-FEB-84 +/-error:	1.00E+05	2.40E+01		30-JUL-84 +/-error:	6.30E+02 4.60E+02		1.10E+01
22-MAR-84 +/-error:	1.00E+05		3.70E+01	01-NOV-84 +/-error:	1.30E+03 5.00E+02		1.20E+01
07-MAY-84 +/-error:	1.10E+05	2.40E+01	3.20E+01	6-31-31 06-JAN-84 +/-error:	2.10E+05	2.20E+01	
05-JUN-84 +/-error:	1.00E+05		3.70E+01	30-MAR-84 +/-error:	2.00E+05		3.00E+01
15-JUN-84 +/-error:	1.00E+05	2.60E+01	3.20E+01	22-JUN-84 +/-error:	1.90E+05	2.20E+01	3.30E+01
17-JUL-84 +/-error:	1.10E+05		3.50E+01	30-SEP-84 +/-error:	1.80E+05		3.10E+01
09-AUG-84 +/-error:	1.20E+05		3.50E+01	6-31-31P 06-JAN-84 +/-error:	-2.80E+02 4.30E+02	7.50E-02	
11-SEP-84 +/-error:	1.10E+05						

#--- PHENOL DISULFONIC ACID METHOD

@--- SPECIFIC NITRATE ION METHOD

#--- PHENOL DISULFONIC ACID METHOD

@--- SPECIFIC NITRATE ION METHOD

B.2.33

9 2 1 2 1 3 2 1 0 0 5

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-31-31P 30-MAR-84 +/-error:	-1.50E+02		7.30E-01	6-32-62 19-JAN-84 +/-error:	3.30E+02 4.40E+02	1.80E+01	
22-JUN-84 +/-error:	1.00E+02 4.40E+02		7.80E-01	09-MAY-84 +/-error:	2.20E+03 4.60E+02		4.60E+01
30-SEP-84 +/-error:	1.60E+02 4.90E+02		1.20E+00	21-AUG-84 +/-error:	5.80E+02 4.60E+02		3.30E+01
				30-OCT-84 +/-error:	3.20E+02 4.90E+02		3.70E+01
6-31-53B 26-JUN-84 +/-error:	-3.90E+02 4.30E+02		1.10E+01	6-32-70B 24-JAN-84 +/-error:	2.80E+05	7.50E+00	
6-32-22 20-MAR-84 +/-error:	6.40E+05		5.20E+01	09-MAY-84 +/-error:	2.80E+05		1.80E+01
24-JUL-84 +/-error:	5.80E+05		6.50E+01	15-AUG-84 +/-error:	3.00E+05		2.60E+01
25-SEP-84 +/-error:	5.60E+05		5.70E+01	26-OCT-84 +/-error:	2.70E+05		2.10E+01
6-32-43 22-MAR-84 +/-error:	2.90E+04		2.60E+01	6-32-72 20-JAN-84 +/-error:	1.20E+05	2.20E+00	
24-JUL-84 +/-error:	3.60E+04		3.10E+01	27-APR-84 +/-error:	1.30E+05		1.60E+01
15-OCT-84 +/-error:	4.40E+04		2.80E+01	21-AUG-84 +/-error:	1.20E+05		9.20E-01

<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>@</sup>— SPECIFIC NITRATE ION METHOD<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>@</sup>— SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 ? 1 0 1 7

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-32-72 26-OCT-84 +/-error:	1.20E+05		8.90E-01	6-33-56 15-OCT-84 +/-error:	5.70E+01 4.80E+02		1.70E+01
6-32-77 20-JAN-84 +/-error:	-2.30E+02 4.40E+02	2.30E+00		6-34-39A 22-MAR-84 +/-error:	1.20E+05		2.80E+01
09-MAY-84 +/-error:	5.20E+03 4.90E+02		5.60E+00	26-JUN-84 +/-error:	9.80E+04		2.20E+01
21-AUG-84 +/-error:	1.80E+02 4.60E+02		7.50E+00	25-SEP-84 +/-error:	8.80E+04		2.00E+01
26-OCT-84 +/-error:	7.40E+02 4.90E+02		7.00E+00	6-34-41B 22-MAR-84 +/-error:	1.30E+05		3.00E+01
6-33-42 22-MAR-84 +/-error:	8.30E+04		2.80E+01	24-JUL-84 +/-error:	1.20E+05		2.90E+01
24-JUL-84 +/-error:	9.50E+04		3.20E+01	15-OCT-84 +/-error:	9.50E+04		2.70E+01
15-OCT-84 +/-error:	9.20E+04		3.20E+01	6-34-42 22-MAR-84 +/-error:	1.20E+05		3.00E+01
6-33-56 16-MAR-84 +/-error:	-2.80E+02		1.60E+01	24-JUL-84 +/-error:	1.10E+05		2.80E+01
14-JUN-84 +/-error:	1.80E+02 4.40E+02		1.30E+01	15-OCT-84 +/-error:	9.80E+04		3.40E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.35

9 2 1 2 1 3 2 1 0 0 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-34-51 16-MAR-84 +/-error:	-3.00E+02		1.70E+01	6-35-66 09-MAY-84 +/-error:	1.10E+06		3.20E+01
14-JUN-84 +/-error:	2.80E+02 4.40E+02		1.10E+01	21-AUG-84 +/-error:	1.20E+06		3.40E+01
15-OCT-84 +/-error:	5.50E+02 4.90E+02		1.30E+01	26-OCT-84 +/-error:	1.00E+06		3.70E+01
6-34-88 16-JAN-84 +/-error:	-1.40E+02 4.40E+02	1.60E+01		6-35-70 24-JAN-84 +/-error:	2.60E+06	2.90E+01	
08-MAY-84 +/-error:	8.60E+03		2.30E+01	09-MAY-84 +/-error:	2.70E+06		3.80E+01
30-JUL-84 +/-error:	-7.30E+01 4.50E+02		2.40E+01	15-AUG-84 +/-error:	2.40E+06		4.90E+01
01-NOV-84 +/-error:	7.40E+02 4.90E+02		2.70E+01	26-OCT-84 +/-error:	2.20E+06		3.70E+01
6-35-9 22-MAR-84 +/-error:	1.50E+05		3.70E+01	6-36-46P 28-FEB-84 +/-error:	5.00E+01 4.30E+02		4.00E+00
21-JUN-84 +/-error:	1.60E+05	2.70E+01	3.50E+01	22-JUN-84 +/-error:	2.00E+02 4.40E+02		
24-SEP-84 +/-error:	1.60E+05		3.90E+01	30-SEP-84 +/-error:	-3.90E+02 4.90E+02		1.10E+00
				29-NOV-84 +/-error:	1.10E+02 5.00E+02		1.80E+00
6-35-66 24-JAN-84 +/-error:	1.20E+06	1.60E+01					

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 2 1 0 7 9

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-36-46Q 28-FEB-84 +/-error:	1.30E+02 4.30E+02		3.40E+00	6-36-93 17-DEC-84 +/-error:	2.90E+03 5.00E+02		1.70E+01
22-JUN-84 +/-error:	-1.50E+02 4.30E+02		1.20E+00				
30-SEP-84 +/-error:	4.80E+02 4.80E+02		9.30E-01	6-37-E4 25-JAN-84 +/-error:	1.10E+04	2.30E-01	
				17-FEB-84 +/-error:	1.20E+04	5.00E-02	
6-36-61A 17-JAN-84 +/-error:		1.30E+01		21-MAR-84 +/-error:	1.20E+04		5.00E-01
09-MAY-84 +/-error:			1.30E+01	07-MAY-84 +/-error:	1.60E+04	2.20E+01	2.80E+01
26-OCT-84 +/-error:			3.00E+01	31-MAY-84 +/-error:	1.70E+04	2.00E+01	3.50E+01
				19-JUN-84 +/-error:	1.70E+04	1.80E+01	2.70E+01
6-36-61B 19-JAN-84 +/-error:	-5.00E+02 4.40E+02	9.80E-02		16-JUL-84 +/-error:	1.90E+04		3.00E+01
09-MAY-84 +/-error:	-9.80E+01 4.30E+02		6.70E-01	09-AUG-84 +/-error:	1.70E+04		3.40E+01
21-AUG-84 +/-error:	-4.10E+02 4.60E+02		6.80E-01	13-SEP-84 +/-error:	1.80E+04		3.30E+01
26-OCT-84 +/-error:	1.80E+03 5.00E+02		8.40E-01	08-OCT-84 +/-error:	1.90E+04		3.60E+01
				15-NOV-84 +/-error:	1.70E+04		3.30E+01
6-36-93 01-JUN-84 +/-error:		5.20E+02 4.50E+02	3.00E+01				

<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>@</sup>— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.37

9 2 1 2 3 3 2 1 0 1 0

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-37-E4 13-DEC-84 +/-error:	2.10E+04		3.50E+01	6-38-15 27-SEP-84 +/-error:	5.80E+05		6.60E+01
6-37-43 22-MAR-84 +/-error:	8.70E+04		1.10E+01	6-38-65 24-FEB-84 +/-error:	2.20E+05		1.90E+02
26-JUN-84 +/-error:	5.30E+04		7.70E+00	16-JUN-84 +/-error:	2.60E+05		1.20E+02
25-SEP-84 +/-error:	4.60E+04		8.40E+00	21-AUG-84 +/-error:	1.60E+05		1.90E+02
				29-NOV-84 +/-error:	2.70E+05		1.40E+02
6-37-82A 16-JAN-84 +/-error:	4.80E+02	2.90E+01		6-38-70 20-JAN-84 +/-error:	2.60E+03	2.60E+02	
01-MAY-84 +/-error:	8.00E+03		4.50E+01	09-MAY-84 +/-error:	4.70E+02		
30-JUL-84 +/-error:	4.20E+02		2.70E+01	15-AUG-84 +/-error:	2.30E+03		2.30E+02
01-NOV-84 +/-error:	1.20E+03		3.30E+01	26-OCT-84 +/-error:	4.80E+02		2.80E+02
					2.90E+03		2.50E+02
6-38-15 20-MAR-84 +/-error:	5.80E+05		6.70E+01	6-39-0 25-JAN-84 +/-error:	2.40E+05	2.90E+01	
21-JUN-84 +/-error:	5.70E+05		6.30E+01				

<sup>#</sup>-- PHENOL DISULFONIC ACID METHOD<sup>@</sup>-- SPECIFIC NITRATE ION METHOD<sup>#</sup>-- PHENOL DISULFONIC ACID METHOD<sup>@</sup>-- SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 2 1 0 1 1

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-39-0 17-FEB-84 +/-error:	2.50E+05	3.50E+01		6-39-79 26-JAN-84 +/-error:	5.50E+02 4.50E+02	8.00E-01	
21-MAR-84 +/-error:	2.40E+05		4.20E+01	09-MAY-84 +/-error:	-7.00E+01 4.30E+02		1.60E+00
07-MAY-84 +/-error:	2.40E+05	3.60E+01	4.10E+01	26-OCT-84 +/-error:	1.60E+03 5.00E+02		2.40E+00
31-MAY-84 +/-error:	2.40E+05	3.30E+01	5.40E+01				
19-JUN-84 +/-error:	2.40E+05	3.30E+01	4.70E+01	6-40-1 21-MAR-84 +/-error:	2.40E+05		4.30E+01
16-JUL-84 +/-error:	2.40E+05		4.10E+01	19-JUN-84 +/-error:	2.40E+05		4.60E+01
09-AUG-84 +/-error:	2.50E+05		5.20E+01	17-SEP-84 +/-error:	2.30E+05		4.80E+01
13-SEP-84 +/-error:	2.40E+05		5.20E+01				
08-OCT-84 +/-error:	2.30E+05		4.90E+01	6-40-33A 20-MAR-84 +/-error:	8.10E+01 4.40E+02		7.70E-01
15-NOV-84 +/-error:	1.90E+05		5.00E+01	24-JUL-84 +/-error:			1.20E+00
13-DEC-84 +/-error:	2.40E+05		5.80E+01	25-SEP-84 +/-error:	-2.70E+02 4.90E+02		1.00E+00
6-39-39 27-NOV-84 +/-error:	6.40E+02 4.90E+02		1.50E+00	6-40-62 17-JAN-84 +/-error:	2.30E+04	2.60E+01	

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B239

9 2 1 2 : 3 2 1 0 1 2

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-40-62 11-APR-84 +/-error:	2.80E+04		4.20E+01	6-41-1 08-OCT-84 +/-error:	2.30E+05		4.80E+01
15-AUG-84 +/-error:	3.50E+04		4.70E+01	15-NOV-84 +/-error:	2.00E+05		5.00E+01
26-OCT-84 +/-error:	3.70E+04		4.50E+01	13-DEC-84 +/-error:	2.20E+05		5.40E+01
6-41-1 24-JAN-84 +/-error:	2.30E+05	2.50E+01		6-41-23 20-MAR-84 +/-error:	3.70E+05		3.40E+01
17-FEB-84 +/-error:	2.50E+05	3.40E+01		24-JUL-84 +/-error:	3.50E+05		4.00E+01
21-MAR-84 +/-error:	2.40E+05		4.10E+01	25-SEP-84 +/-error:	3.30E+05		3.90E+01
07-MAY-84 +/-error:	2.40E+05	3.80E+01	4.20E+01	6-42-2 24-JAN-84 +/-error:	2.10E+05	2.30E+01	
31-MAY-84 +/-error:	2.40E+05	3.70E+01	5.50E+01	17-FEB-84 +/-error:	2.20E+05	2.90E+01	
19-JUN-84 +/-error:	2.40E+05	3.40E+01	4.30E+01	21-MAR-84 +/-error:	2.10E+05		3.90E+01
16-JUL-84 +/-error:	2.50E+05		4.40E+01	07-MAY-84 +/-error:	2.10E+05	3.00E+01	4.00E+01
09-AUG-84 +/-error:	2.40E+05		4.70E+01	31-MAY-84 +/-error:	2.10E+05	3.40E+01	5.00E+01
13-SEP-84 +/-error:	2.30E+05		5.30E+01				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 2 1 0 1 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-42-2 19-JUN-84 +/-error:	1.50E+05	3.00E+01	4.20E+01	6-43-3 17-FEB-84 +/-error:	2.40E+05	3.00E+01	
16-JUL-84 +/-error:	2.20E+05		4.10E+01	21-MAR-84 +/-error:	2.10E+05		3.60E+01
09-AUG-84 +/-error:	2.10E+05		4.50E+01	07-MAY-84 +/-error:	1.90E+05	2.90E+01	3.50E+01
13-SEP-84 +/-error:	2.10E+05		4.60E+01	31-MAY-84 +/-error:	2.00E+05	2.90E+01	4.70E+01
08-OCT-84 +/-error:	2.20E+05		5.00E+01	19-JUN-84 +/-error:	2.10E+05	3.10E+01	4.10E+01
15-NOV-84 +/-error:	1.80E+05		5.20E+01	16-JUL-84 +/-error:	2.10E+05		4.00E+01
13-DEC-84 +/-error:	2.20E+05		5.40E+01	09-AUG-84 +/-error:	2.10E+05		4.60E+01
				13-SEP-84 +/-error:	2.30E+05		4.70E+01
6-42-12A 22-MAR-84 +/-error:	3.20E+05		5.80E+01	08-OCT-84 +/-error:	2.10E+05		5.00E+01
21-JUN-84 +/-error:	3.30E+05	3.70E+01	4.90E+01	15-NOV-84 +/-error:	1.90E+05		4.60E+01
27-SEP-84 +/-error:	3.30E+05		5.30E+01	13-DEC-84 +/-error:	2.30E+05		5.60E+01
6-43-3 25-JAN-84 +/-error:	2.30E+05	2.70E+01		6-43-88 16-JAN-84 +/-error:	3.60E+02	2.10E+00	

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.41

9 2 | 2 | 3 | 2 | 0 | 1 | 4

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-43-88 08-MAY-84 +/-error:	-2.90E+02 4.40E+02		1.70E+01	6-44-4 08-OCT-84 +/-error:	1.30E+05		1.70E+00
30-JUL-84 +/-error:	1.50E+02 4.50E+02		2.00E+01	19-NOV-84 +/-error:	1.30E+05		1.20E+01
20-NOV-84 +/-error:	8.40E+00 5.00E+02		1.40E+01	14-DEC-84 +/-error:	1.10E+05		1.30E+01
6-44-4 25-JAN-84 +/-error:	9.90E+04	1.40E+01		6-44-64 17-JAN-84 +/-error:	2.00E+02 4.50E+02	3.40E+01	
17-FEB-84 +/-error:	1.00E+05	1.50E+01		16-APR-84 +/-error:	-1.10E+02 4.50E+02		4.00E+01
21-MAR-84 +/-error:	1.10E+05		2.60E+01	20-AUG-84 +/-error:	-1.20E+02 4.60E+02		4.40E+01
07-MAY-84 +/-error:	1.00E+05	4.80E-01	8.80E-01	26-OCT-84 +/-error:	1.00E+03 4.90E+02		4.60E+01
31-MAY-84 +/-error:	9.50E+04	1.40E+00	3.70E+00	6-45-2 24-JAN-84 +/-error:		2.10E+01	
19-JUN-84 +/-error:	9.90E+04	1.10E+00	2.90E+00	17-FEB-84 +/-error:	1.50E+05		
16-JUL-84 +/-error:	1.00E+05		3.60E+00	21-MAR-84 +/-error:	1.60E+05	2.80E+01	
09-AUG-84 +/-error:	1.00E+05		2.20E+00	07-MAY-84 +/-error:	1.80E+05		3.70E+01
17-SEP-84 +/-error:	1.10E+05		2.10E+00	07-MAY-84 +/-error:	1.40E+05		3.30E+01

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 8 2 1 0 1 5

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>€</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>€</sup> (MG/L)
6-45-2 31-MAY-84 +/-error:	1.70E+05		4.50E+01	6-45-42 30-OCT-84 +/-error:	5.60E+04		9.80E+00
21-JUN-84 +/-error:	1.50E+05		3.50E+01				
16-JUL-84 +/-error:	1.70E+05		3.60E+01	6-45-69A 24-FEB-84 +/-error:	-2.80E+01		4.70E+01
09-AUG-84 +/-error:	2.00E+05		4.90E+01	16-JUN-84 +/-error:	3.20E+02		2.80E+01
17-SEP-84 +/-error:	1.80E+05		4.20E+01	21-AUG-84 +/-error:	2.30E+01		3.20E+01
08-OCT-84 +/-error:	2.00E+05		4.80E+01	11-DEC-84 +/-error:	3.40E+02		3.70E+01
19-NOV-84 +/-error:	1.70E+05		4.70E+01				
13-DEC-84 +/-error:	1.90E+05		4.50E+01	6-46-4 24-JAN-84 +/-error:	1.90E+05	2.20E+01	
				17-FEB-84 +/-error:	2.00E+05	2.60E+01	
6-45-42 24-JAN-84 +/-error:	6.60E+04	3.10E+00		21-MAR-84 +/-error:	1.80E+05		3.10E+01
10-APR-84 +/-error:	6.70E+04		7.00E+00	07-MAY-84 +/-error:	2.10E+05	2.50E+01	3.40E+01
26-APR-84 +/-error:	6.50E+04		9.40E+00	31-MAY-84 +/-error:	2.10E+05	2.50E+01	4.50E+01
19-JUL-84 +/-error:	6.30E+04		6.80E+00	19-JUN-84 +/-error:	2.10E+05	2.70E+01	3.80E+01

#— PHENOL DISULFONIC ACID METHOD

€— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

€— SPECIFIC NITRATE ION METHOD

B.2.43

9 2 1 2 3 3 2 1 0 1 6

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-46-4 16-JUL-84 +/-error:	2.20E+05		3.70E+01	6-47-5 21-MAR-84 +/-error:	1.20E+05		2.40E+01
09-AUG-84 +/-error:	1.90E+05		3.60E+01	07-MAY-84 +/-error:	8.40E+04	1.30E+01	1.90E+01
13-SEP-84 +/-error:	1.70E+05		3.40E+01	31-MAY-84 +/-error:	1.00E+05	1.40E+01	2.80E+01
08-OCT-84 +/-error:	1.50E+05		3.60E+01	21-JUN-84 +/-error:	6.50E+04	1.40E+01	1.70E+01
19-NOV-84 +/-error:	1.40E+05		3.70E+01	16-JUL-84 +/-error:	1.20E+05		2.60E+01
13-DEC-84 +/-error:	1.50E+05		3.90E+01	09-AUG-84 +/-error:	1.20E+05		2.90E+01
				17-SEP-84 +/-error:	1.60E+05		3.30E+01
6-46-21B 20-MAR-84 +/-error:	3.60E+04		1.90E+01	08-OCT-84 +/-error:	1.60E+05		3.50E+01
24-JUL-84 +/-error:	3.80E+04		2.40E+01	19-NOV-84 +/-error:	1.40E+05		3.60E+01
27-SEP-84 +/-error:	3.80E+04		2.10E+01	13-DEC-84 +/-error:	1.20E+05		3.30E+01
6-47-5 24-JAN-84 +/-error:	8.90E+04	1.20E+01		6-47-35A 18-JAN-84 +/-error:	-8.20E+01	5.40E+00	
17-FEB-84 +/-error:	1.00E+05	1.50E+01		07-MAY-84 +/-error:	4.00E+01		1.10E+01
					4.40E+02		

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 2 1 0 1 7

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>§</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>§</sup> (MG/L)
6-47-35A 20-JUL-84 +/-error:	3.40E+02 4.50E+02		1.30E+01	6-48-7 27-SEP-84 +/-error:	-3.30E+02 4.90E+02		9.30E+00
30-OCT-84 +/-error:	2.50E+02 4.80E+02		1.20E+01				
				6-48-18 20-MAR-84 +/-error:	3.10E+02 4.50E+02		8.80E+00
6-47-46A 24-FEB-84 +/-error:	7.20E+02 4.40E+02		3.00E+01	21-JUN-84 +/-error:	1.30E+03 4.60E+02		9.60E+00
25-JUN-84 +/-error:	-2.40E+02 4.40E+02		1.70E+01	25-SEP-84 +/-error:	-3.20E+02 4.90E+02		1.20E+01
17-SEP-84 +/-error:	-1.20E+02 5.10E+02		1.90E+01				
27-NOV-84 +/-error:	4.60E+02 4.90E+02		2.10E+01	6-48-71 17-JAN-84 +/-error:	3.00E+02 4.50E+02	2.20E+01	
				16-APR-84 +/-error:	-4.10E+02 4.40E+02		2.80E+01
6-47-60 17-JAN-84 +/-error:	-1.60E+02 4.40E+02	2.00E+01		20-AUG-84 +/-error:	-3.70E+02 4.60E+02		2.70E+01
11-APR-84 +/-error:	-1.20E+01 4.50E+02		2.50E+01	02-NOV-84 +/-error:	7.80E+02 4.90E+02		3.10E+01
20-AUG-84 +/-error:	-3.00E+02 4.60E+02		2.60E+01				
30-OCT-84 +/-error:	8.00E+02 4.90E+02		2.70E+01	6-49-13E 22-MAR-84 +/-error:	-9.20E+01 4.40E+02		9.20E+00
				21-JUN-84 +/-error:	-3.40E+01 4.40E+02		8.40E+00
6-48-7 21-MAR-84 +/-error:	-8.90E+01 4.40E+02		5.30E+00				

<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>§</sup>— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

§— SPECIFIC NITRATE ION METHOD

B.2.45

9 2 1 2 3 9 2 1 0 1 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-49-13E 25-SEP-84 +/-error:	-9.70E+01 4.90E+02		9.80E+00	6-49-57 11-APR-84 +/-error:	1.80E+04		1.60E+02
				20-AUG-84 +/-error:	2.10E+04		2.50E+02
6-49-28 19-JAN-84 +/-error:	-3.00E+02 4.40E+02	2.00E-02		30-OCT-84 +/-error:	2.00E+04		2.70E+02
03-MAY-84 +/-error:	-4.40E+02 4.40E+02		8.70E-01				
19-JUL-84 +/-error:	5.60E+02 4.60E+02		1.00E+00	6-49-79 17-JAN-84 +/-error:	-1.30E+02 4.40E+02	3.60E+01	
16-OCT-84 +/-error:	1.60E+03 5.00E+02		1.60E+00	16-APR-84 +/-error:	-3.50E+01 4.50E+02		5.20E+01
				20-AUG-84 +/-error:	-2.10E+02 4.60E+02		4.70E+01
6-49-55A 17-JAN-84 +/-error:	1.40E+01 4.50E+02	4.30E+00		01-NOV-84 +/-error:	5.40E+02 4.90E+02		5.70E+01
11-APR-84 +/-error:	2.40E+03 4.80E+02		5.30E+01				
20-AUG-84 +/-error:	3.40E+03 4.90E+02		6.60E+01	6-50-28B 19-JAN-84 +/-error:	1.10E+02 4.40E+02	1.80E+00	
30-OCT-84 +/-error:	4.50E+03 5.30E+02		8.10E+01	03-MAY-84 +/-error:	1.10E+01 4.40E+02		8.10E+00
				20-JUL-84 +/-error:	8.70E+02 4.60E+02		6.60E+00
6-49-57 17-JAN-84 +/-error:	1.90E+04	1.90E+02		16-OCT-84 +/-error:	8.40E+02 4.90E+02		6.80E+00

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 1 0 1 9

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-50-30 19-JAN-84 +/-error:	-9.90E+01 4.40E+02	3.60E+00		6-50-53 30-OCT-84 +/-error:	6.10E+02 4.90E+02		3.50E+01
03-MAY-84 +/-error:	-4.00E+02 4.40E+02		4.40E+00				
20-JUL-84 +/-error:	8.10E+02 4.60E+02		3.10E+00	6-50-85 16-JAN-84 +/-error:	2.60E+01 4.50E+02	2.70E+01	
30-OCT-84 +/-error:	4.00E+02 4.90E+02		4.10E+00	16-APR-84 +/-error:	-5.50E+01 4.50E+02		2.90E+01
				20-AUG-84 +/-error:	4.60E+01 4.60E+02		3.10E+01
6-50-42 18-JAN-84 +/-error:	2.10E+03 4.70E+02	5.60E-01		01-NOV-84 +/-error:	1.00E+03 4.90E+02		3.70E+01
11-APR-84 +/-error:	2.10E+03 4.70E+02		1.50E+00				
19-JUL-84 +/-error:	2.90E+03 4.80E+02		2.50E+00	6-51-63 17-JAN-84 +/-error:	-1.70E+02 4.40E+02	5.90E+00	
03-OCT-84 +/-error:	1.80E+03 5.10E+02		4.60E+00	16-APR-84 +/-error:	-1.90E+02 4.50E+02		1.40E+01
				20-AUG-84 +/-error:	-3.50E+02 4.60E+02		1.40E+01
6-50-53 18-JAN-84 +/-error:	-5.70E+01 4.40E+02	2.20E+01		02-NOV-84 +/-error:	6.90E+02 4.90E+02		1.70E+01
11-APR-84 +/-error:	2.00E+01 4.50E+02		3.00E+01				
20-AUG-84 +/-error:	2.80E+02 4.60E+02		2.80E+01	6-51-75 17-JAN-84 +/-error:	3.50E+02 4.50E+02	2.00E+00	

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.47

9 2 1 2 1 3 2 1 0 2 0

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>€</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>€</sup> (MG/L)
6-51-75 16-APR-84 +/-error:	-1.40E+02 4.50E+02		7.40E+00	6-53-103 01-JUN-84 +/-error:	-7.20E+01 4.40E+02		9.90E-01
20-AUG-84 +/-error:	-2.80E+02 4.60E+02		8.00E+00	21-SEP-84 +/-error:	3.20E+02 5.20E+02		1.00E+00
01-NOV-84 +/-error:	1.00E+03 4.90E+02		1.10E+01	6-54-34 19-JAN-84 +/-error:	-3.80E+02 4.40E+02	2.40E-01	
6-52-19 10-MAY-84 +/-error:			6.50E+00	08-MAY-84 +/-error:	-2.50E+02 4.40E+02		5.10E+00
28-NOV-84 +/-error:			8.80E+00	20-JUL-84 +/-error:	5.30E+02 4.60E+02		1.30E+00
				30-OCT-84 +/-error:	1.40E+02 4.80E+02		1.90E+01
6-53-35 19-JAN-84 +/-error:	5.70E+01 4.40E+02	2.00E-01		6-54-37A 19-JAN-84 +/-error:	-1.10E+02 4.40E+02	9.80E-03	
08-MAY-84 +/-error:	-2.70E+02 4.40E+02		4.60E-01	08-MAY-84 +/-error:	-3.20E+02 4.40E+02		1.80E+00
20-JUL-84 +/-error:	6.40E+02 4.60E+02		8.80E-01	20-JUL-84 +/-error:	7.00E+02 4.60E+02		2.00E+00
30-OCT-84 +/-error:	2.70E+02 4.80E+02		1.40E+00	30-OCT-84 +/-error:	1.20E+03 5.00E+02		4.00E+00
6-53-103 28-FEB-84 +/-error:	-5.60E+00 4.30E+02		2.30E+00	6-54-42 21-FEB-84 +/-error:		4.00E-01	

<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>€</sup>— SPECIFIC NITRATE ION METHOD<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>€</sup>— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 1 0 2 1

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-54-42 25-JUN-84 +/-error:	-1.70E+02 4.40E+02		1.00E+00	6-55-44 08-MAY-84 +/-error:	-2.90E+02 4.40E+02		1.70E-01
22-SEP-84 +/-error:			1.50E+00	20-JUL-84 +/-error:	-7.80E+01 4.50E+02		3.00E-01
29-NOV-84 +/-error:	1.00E+02 5.00E+02		2.00E+00	30-OCT-84 +/-error:	3.40E+02 4.90E+02		2.80E-01
6-54-45A 19-JAN-84 +/-error:	-3.20E+02 4.40E+02	1.50E+00		6-55-50A 19-JAN-84 +/-error:	-1.40E+02 4.40E+02	2.60E-01	
08-MAY-84 +/-error:	-3.30E+02 4.40E+02		6.40E+01	08-MAY-84 +/-error:	-1.70E+02 4.40E+02		1.80E+00
30-OCT-84 +/-error:	4.60E+02 4.90E+02		5.20E+01	19-JUL-84 +/-error:	4.30E+02 4.60E+02		1.90E+00
				13-NOV-84 +/-error:	9.80E+02 4.90E+02		2.40E+00
6-55-40 19-JAN-84 +/-error:	-4.50E+02 4.40E+02	2.40E-01		6-55-50C 21-FEB-84 +/-error:	4.30E+02 4.50E+02	1.30E+00	
08-MAY-84 +/-error:	-1.60E+02 4.40E+02		6.40E-01	14-MAY-84 +/-error:	5.80E+02 3.71E+02	4.43E+00	
20-JUL-84 +/-error:	3.70E+02 4.50E+02		9.50E-01	21-AUG-84 +/-error:	-2.90E+02 4.60E+02		2.60E+00
30-OCT-84 +/-error:	2.00E+01 4.80E+02		1.70E+00	11-DEC-84 +/-error:	-4.10E+02 4.70E+02		5.10E+00
6-55-44 19-JAN-84 +/-error:	-3.50E+02 4.40E+02	9.80E-03					

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.2.49

9 2 1 2 3 3 2 1 0 3 2

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-55-50D 19-JAN-84 +/-error:	5.40E+01 4.40E+02	9.80E-01		6-55-89 16-JAN-84 +/-error:		2.10E+00	
08-MAY-84 +/-error:	-9.00E+01 4.40E+02		8.60E+00	16-APR-84 +/-error:			5.60E+00
19-JUL-84 +/-error:	7.60E+02 4.60E+02		2.20E+00	16-AUG-84 +/-error:			6.70E+00
				01-NOV-84 +/-error:			7.10E+00
6-55-70 19-JAN-84 +/-error:	-3.80E+02 4.40E+02	2.00E-02		6-56-43 19-JAN-84 +/-error:	0.00E+00 4.40E+02	9.80E-02	
16-APR-84 +/-error:	-8.70E+01 4.50E+02		4.80E-01	08-MAY-84 +/-error:	-2.20E+02 4.40E+02		9.40E-01
20-AUG-84 +/-error:	-3.60E+02 4.60E+02		7.00E-01	20-JUL-84 +/-error:	3.10E+02 4.50E+02		2.90E+00
02-NOV-84 +/-error:	5.00E+02 4.90E+02		1.20E+00	30-OCT-84 +/-error:	5.30E+02 4.90E+02		1.00E+00
6-55-76 17-JAN-84 +/-error:		1.80E-01		6-57-25A 21-FEB-84 +/-error:	-1.40E+02 4.40E+02	1.60E+00	
16-APR-84 +/-error:			1.10E+01	10-MAY-84 +/-error:	-5.90E+01 4.30E+02		6.50E+00
20-AUG-84 +/-error:			1.00E+01	22-AUG-84 +/-error:	-6.40E+01 4.60E+02		9.70E+00
01-NOV-84 +/-error:			1.50E+01				

<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>@</sup>— SPECIFIC NITRATE ION METHOD<sup>#</sup>— PHENOL DISULFONIC ACID METHOD<sup>@</sup>— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 1 0 2 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-57-25A 07-DEC-84 +/-error:	5.40E+02 4.70E+02		1.10E+01	6-58-24 25-JUN-84 +/-error:	6.80E+01 4.40E+02		5.60E+00
				22-AUG-84 +/-error:	-4.00E+02 4.60E+02		6.00E+00
6-57-29A 21-FEB-84 +/-error:	7.70E+02 4.50E+02	9.40E-01		14-DEC-84 +/-error:	2.90E+03 5.00E+02		7.70E+00
10-MAY-84 +/-error:	6.30E+02 4.40E+02		4.00E+00				
22-AUG-84 +/-error:	2.80E+02 4.60E+02		5.20E+00	6-59-32 16-FEB-84 +/-error:	1.20E+03 4.60E+02	1.90E+00	
07-DEC-84 +/-error:	9.10E+02 4.70E+02		7.00E+00	10-MAY-84 +/-error:	1.10E+02 4.50E+02		5.60E+00
				22-AUG-84 +/-error:	7.90E+02 4.70E+02		6.70E+00
6-57-83 24-FEB-84 +/-error:			9.20E+00	07-DEC-84 +/-error:	1.40E+03 4.80E+02		1.00E+01
25-JUN-84 +/-error:			4.80E+00				
21-SEP-84 +/-error:			5.60E+00	6-59-58 18-JAN-84 +/-error:	1.40E+03 4.60E+02	8.30E-01	
19-DEC-84 +/-error:			5.60E+00	08-MAY-84 +/-error:	9.80E+02 4.50E+02		2.10E+00
				02-AUG-84 +/-error:	1.20E+03 4.60E+02		7.80E-01
6-58-24 21-FEB-84 +/-error:	2.20E+02 4.50E+02	1.70E+00		03-OCT-84 +/-error:	9.20E+02 5.00E+02		3.50E+00

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 1 0 2 4

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-59-80B 16-JAN-84 +/-error:		3.30E-01		6-60-60 19-JAN-84 +/-error:	2.40E+03 4.70E+02	1.60E+00	
16-APR-84 +/-error:			8.70E-01	08-MAY-84 +/-error:	6.20E+03		4.20E+00
16-AUG-84 +/-error:			1.20E+00	02-AUG-84 +/-error:	7.70E+03		2.80E+00
01-NOV-84 +/-error:			2.00E+00	02-NOV-84 +/-error:	8.30E+03		4.50E+00
6-60-32 16-FEB-84 +/-error:	1.20E+03 4.60E+02	2.40E+00		6-61-37 18-JAN-84 +/-error:		1.80E+00	
10-MAY-84 +/-error:	9.90E+02 4.50E+02		5.10E+00	18-APR-84 +/-error:			6.10E+00
22-AUG-84 +/-error:	4.50E+02 4.60E+02		8.60E+00	17-AUG-84 +/-error:	-3.10E+02 4.60E+02		7.20E+00
07-DEC-84 +/-error:	1.50E+03 4.80E+02		1.10E+01	02-NOV-84 +/-error:			7.80E+00
6-60-57 18-JAN-84 +/-error:	8.30E+02 4.50E+02	2.80E-01		6-61-41 18-JAN-84 +/-error:	-7.10E+01 4.40E+02	1.30E+00	
08-MAY-84 +/-error:	2.30E+02 4.40E+02		1.30E+00	18-APR-84 +/-error:	1.10E+02 4.50E+02		5.20E+00
02-AUG-84 +/-error:	1.30E+03 4.60E+02		2.50E+00	17-AUG-84 +/-error:			5.20E+00

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 5 3 2 1 0 2 5

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-61-41 02-NOV-84 +/-error:	8.60E+02 4.90E+02		5.80E+00	6-62-31 10-MAY-84 +/-error:			9.30E+00
				22-AUG-84 +/-error:	4.50E+02 4.60E+02		1.10E+01
6-61-62 18-JAN-84 +/-error:	8.70E+03	1.10E+01		07-DEC-84 +/-error:			2.10E+01
08-MAY-84 +/-error:	8.70E+03		2.50E+01	6-62-43F 18-JAN-84 +/-error:	8.00E+02 4.50E+02	1.70E+00	
02-AUG-84 +/-error:	9.20E+03		2.00E+01	18-APR-84 +/-error:	1.00E+03 4.60E+02		4.80E+00
02-NOV-84 +/-error:	7.90E+03		2.60E+01	17-AUG-84 +/-error:	4.70E+02 4.60E+02		5.50E+00
6-61-66 18-JAN-84 +/-error:	-2.80E+02 4.40E+02	2.40E+00		02-NOV-84 +/-error:	1.70E+03 5.00E+02		6.10E+00
08-MAY-84 +/-error:	9.10E+02 4.50E+02		6.50E+00	6-63-25A 16-FEB-84 +/-error:	4.30E+02 4.50E+02	1.20E+01	
02-AUG-84 +/-error:	5.20E+01 4.50E+02		7.00E+00	10-MAY-84 +/-error:	-3.20E+02 4.30E+02		2.80E+01
02-NOV-84 +/-error:	1.10E+03 5.00E+02		8.60E+00	22-AUG-84 +/-error:	-3.60E+02 4.60E+02		2.70E+01
6-62-31 16-FEB-84 +/-error:		3.60E+00		30-NOV-84 +/-error:	2.00E+02 4.80E+02		2.30E+01

#--- PHENOL DISULFONIC ACID METHOD

@--- SPECIFIC NITRATE ION METHOD

#--- PHENOL DISULFONIC ACID METHOD

@--- SPECIFIC NITRATE ION METHOD

B.2.53

9 2 1 2 1 3 2 1 0 2 6

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-63-51 09-JUN-84 +/-error:	7.80E+02 4.50E+02		1.00E+01	6-63-90 28-FEB-84 +/-error:	-1.00E+02 4.30E+02		
29-NOV-84 +/-error:	1.10E+03 5.20E+02		1.40E+01	25-JUN-84 +/-error:	-1.10E+02 4.40E+02		7.90E+00
				23-SEP-84 +/-error:	-8.10E+01 5.10E+02		8.60E+00
6-63-55 23-FEB-84 +/-error:	7.10E+02 4.50E+02	2.50E-01		17-DEC-84 +/-error:	2.80E+03 5.00E+02		1.10E+01
09-JUN-84 +/-error:	9.40E+02 4.50E+02		2.00E+00				
20-SEP-84 +/-error:	1.40E+03 5.30E+02		2.60E+00	6-64-27 16-FEB-84 +/-error:		1.60E+01	
29-NOV-84 +/-error:	9.20E+02 5.10E+02		3.20E+00	10-MAY-84 +/-error:	-2.00E+02 4.30E+02		3.90E+01
				23-AUG-84 +/-error:			4.60E+01
6-63-58 28-FEB-84 +/-error:	4.20E+02 4.40E+02		2.40E+01	03-DEC-84 +/-error:	4.60E+02 4.90E+02		4.60E+01
09-JUN-84 +/-error:	8.10E+02 4.50E+02		9.40E+00				
24-AUG-84 +/-error:	4.40E+02 4.60E+02		8.40E+00	6-64-62 28-FEB-84 +/-error:	5.90E+03		1.10E+01
29-NOV-84 +/-error:	6.60E+02 5.10E+02		1.20E+01	09-JUN-84 +/-error:	7.40E+03		1.60E+01
				23-SEP-84 +/-error:	1.70E+03 5.40E+02		2.00E+01
6-63-90 24-FEB-84 +/-error:			1.30E+01				

<sup>#</sup>-- PHENOL DISULFONIC ACID METHOD<sup>@</sup>-- SPECIFIC NITRATE ION METHOD

#-- PHENOL DISULFONIC ACID METHOD

@-- SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 1 0 2 7

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-64-62 14-DEC-84 +/-error:	1.00E+04		2.40E+01	6-65-72 24-FEB-84 +/-error:	2.50E+03		2.30E+01
				09-JUN-84 +/-error:	2.90E+03		1.50E+01
6-65-23 11-MAY-84 +/-error:	-1.10E+02 4.30E+02		1.10E+00	21-SEP-84 +/-error:	2.70E+03 5.50E+02		1.70E+01
				14-DEC-84 +/-error:	6.50E+03		2.20E+01
6-65-50 18-JAN-84 +/-error:	1.10E+03 4.60E+02	9.20E-01		6-65-83 24-FEB-84 +/-error:	1.10E+03 4.50E+02		1.10E+01
				09-JUN-84 +/-error:	1.60E+03 4.60E+02		5.50E+00
17-AUG-84 +/-error:	1.40E+02 4.60E+02		3.70E+00	21-SEP-84 +/-error:	1.50E+03 5.30E+02		6.50E+00
02-NOV-84 +/-error:	1.40E+03 5.00E+02		3.90E+00	19-DEC-84 +/-error:	4.50E+03 5.20E+02		6.70E+00
6-65-59 28-FEB-84 +/-error:	7.30E+02 4.40E+02		3.10E+00	6-66-23 16-FEB-84 +/-error:		1.70E+01	
				10-MAY-84 +/-error:			3.30E+01
09-JUN-84 +/-error:	9.30E+02 4.50E+02		1.40E+00	23-AUG-84 +/-error:			4.50E+01
20-SEP-84 +/-error:	8.00E+02 5.30E+02		1.60E+00				
07-DEC-84 +/-error:	9.90E+02 4.80E+02		2.60E+00				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

B.255

9 2 1 2 1 3 2 1 0 2 3

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>§</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>§</sup> (MG/L)
6-66-23 30-NOV-84 +/-error:			5.00E+01	6-66-58 09-JUN-84 +/-error:	4.70E+02 4.40E+02		2.10E+00
				20-SEP-84 +/-error:	7.40E+02 5.30E+02		2.80E+00
6-66-38 16-FEB-84 +/-error:	2.50E-01			29-NOV-84 +/-error:	7.60E+02 5.10E+02		3.60E+00
16-JUN-84 +/-error:			1.10E+00				
23-AUG-84 +/-error:			2.60E+00	6-66-64 24-FEB-84 +/-error:	4.90E+03 4.90E+02		1.90E+01
07-DEC-84 +/-error:			3.70E+00	09-JUN-84 +/-error:	6.50E+03		1.40E+01
				23-SEP-84 +/-error:	2.40E+03 5.40E+02		1.70E+01
6-66-39 16-FEB-84 +/-error:	9.70E-03			17-DEC-84 +/-error:	7.90E+03		1.80E+01
16-JUN-84 +/-error:			7.80E-01				
23-AUG-84 +/-error:			7.80E-01	6-66-103 01-JUN-84 +/-error:	6.60E+02 4.50E+02		8.40E-01
07-DEC-84 +/-error:			5.20E+00				
6-66-58 16-FEB-84 +/-error:	5.90E+02 4.50E+02	5.80E-01		6-67-51 18-JAN-84 +/-error:	9.80E+02 4.50E+02	7.20E-01	
				18-APR-84 +/-error:	8.50E+02 4.60E+02		2.70E+00

#— PHENOL DISULFONIC ACID METHOD

§— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

§— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 3 2 1 0 ? 9

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-67-51 17-AUG-84 +/-error:	9.80E+02 4.70E+02		2.90E+00	6-69-38 22-FEB-84 +/-error:	3.00E+02 4.50E+02	3.90E-01	
19-NOV-84 +/-error:	2.00E+03 5.20E+02		3.70E+00	16-JUN-84 +/-error:	-8.60E+01 4.40E+02		4.00E+00
				17-SEP-84 +/-error:	8.50E+02 5.30E+02		2.60E+00
6-67-86 24-FEB-84 +/-error:	8.90E+02 4.40E+02		8.70E+00	14-DEC-84 +/-error:	7.50E+02 4.80E+02		4.60E+00
09-JUN-84 +/-error:	1.40E+03 4.60E+02		4.60E+00				
23-SEP-84 +/-error:	-4.90E+02 5.00E+02		5.40E+00	6-70-68 16-JUN-84 +/-error:	1.60E+03 4.60E+02		3.00E+00
19-DEC-84 +/-error:	3.80E+03 5.20E+02		5.10E+00	07-DEC-84 +/-error:	1.50E+03 4.80E+02		4.20E+00
6-67-98 24-FEB-84 +/-error:	4.70E+01 4.30E+02		1.20E+01	6-71-30 11-MAY-84 +/-error:	-1.50E+01 4.30E+02		1.70E+01
25-JUN-84 +/-error:	-2.40E+02 4.40E+02		6.70E+00	28-NOV-84 +/-error:	-1.60E+02 5.00E+02		3.90E+01
23-SEP-84 +/-error:	-4.90E+02 5.00E+02		7.80E+00				
27-DEC-84 +/-error:	-2.70E+02 5.20E+02		9.70E+00	6-71-52 16-FEB-84 +/-error:	1.30E+03 4.60E+02	3.40E+00	
				25-MAY-84 +/-error:	1.10E+03 4.50E+02		9.00E+00
6-68-105 01-JUN-84 +/-error:	5.00E+02 4.40E+02		3.70E+00				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

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01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-71-52 30-AUG-84 +/-error:	1.20E+03 4.50E+02		9.00E+00	6-72-92 25-JUN-84 +/-error:	3.10E+03 4.80E+02		7.40E+00
30-NOV-84 +/-error:	1.40E+03 5.00E+02		1.00E+01	27-DEC-84 +/-error:	2.20E+03 5.50E+02		9.80E+00
6-71-77 09-JUN-84 +/-error:	3.40E+03 4.80E+02		7.50E+00	6-72-98 01-JUN-84 +/-error:	1.00E+03 4.50E+02		2.20E+00
17-DEC-84 +/-error:	6.70E+03		1.40E+01	6-73-61 23-FEB-84 +/-error:	2.10E+02 4.50E+02	4.60E+00	
6-72-73 09-JUN-84 +/-error:	1.30E+03 4.50E+02		3.60E+00	16-JUN-84 +/-error:	6.50E+02 4.50E+02		1.00E+01
07-DEC-84 +/-error:	1.80E+03 4.80E+02		5.60E+00	30-AUG-84 +/-error:	9.20E+01 4.40E+02		1.00E+01
				07-DEC-84 +/-error:	1.90E+02 4.70E+02		1.20E+01
6-72-88 24-FEB-84 +/-error:	3.40E+03 4.20E+02		9.70E+00	6-74-44 22-FEB-84 +/-error:	4.60E+02 4.50E+02	9.70E-02	
25-JUN-84 +/-error:	3.90E+03 4.90E+02		5.60E+00	16-JUN-84 +/-error:	1.20E+02 4.40E+02		3.60E+00
23-SEP-84 +/-error:	2.10E+03 5.40E+02		1.70E+01	17-SEP-84 +/-error:	-1.60E+02 5.10E+02		4.40E+00
17-DEC-84 +/-error:	7.10E+03		1.30E+01				

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

9 2 1 2 3 8 2 1 0 3 1

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>€</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>€</sup> (MG/L)
6-74-44 03-DEC-84 +/-error:	3.20E+02 4.90E+02		3.50E+00	6-78-62 07-DEC-84 +/-error:			1.10E+01
6-77-36 17-FEB-84 +/-error:	-4.60E+01 4.50E+02	8.40E+01		6-80-43P 28-JUN-84 +/-error:			1.10E+00
16-JUN-84 +/-error:	2.30E+02 4.40E+02		9.30E+01	30-NOV-84 +/-error:			2.10E+00
23-AUG-84 +/-error:	-3.50E+02 4.60E+02		1.10E+02	6-80-43Q 28-JUN-84 +/-error:			
30-NOV-84 +/-error:	5.50E+02 4.90E+02		1.20E+02	30-NOV-84 +/-error:			9.10E-01
6-77-54 23-FEB-84 +/-error:		4.50E+00					2.80E+00
24-MAY-84 +/-error:			1.00E+01	6-80-43R 28-JUN-84 +/-error:			9.40E-01
24-AUG-84 +/-error:			1.10E+01	30-NOV-84 +/-error:			2.10E+00
30-NOV-84 +/-error:			1.10E+01	6-80-43S 28-JUN-84 +/-error:			8.90E+00
6-78-62 24-MAY-84 +/-error:			7.70E+00	30-NOV-84 +/-error:			1.30E+01

<sup>#</sup>-- PHENOL DISULFONIC ACID METHOD<sup>€</sup>-- SPECIFIC NITRATE ION METHOD<sup>#</sup>-- PHENOL DISULFONIC ACID METHOD<sup>€</sup>-- SPECIFIC NITRATE ION METHOD

9 2 1 2 &gt; 3 2 1 0 3 2

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE# (MG/L)	NITRATE@ (MG/L)
6-81-58 23-FEB-84 +/-error:	2.90E+01 4.40E+02	1.20E+00		6-87-55 17-DEC-84 +/-error:	8.30E+04		1.80E+01
24-MAY-84 +/-error:	-3.00E+02 4.30E+02		3.10E+00				
24-AUG-84 +/-error:	-3.80E+02 4.60E+02		3.60E+00	6-89-35 22-FEB-84 +/-error:		4.80E+00	
17-DEC-84 +/-error:	2.20E+03 5.00E+02		5.30E+00	25-MAY-84 +/-error:			1.20E+01
				20-SEP-84 +/-error:			1.20E+01
6-83-47 16-JUN-84 +/-error:	8.80E+02 4.50E+02			03-DEC-84 +/-error:			1.40E+01
30-NOV-84 +/-error:	1.00E+03 4.90E+02						
6-84-35AO 16-JUN-84 +/-error:	9.10E+02 4.50E+02		1.80E+00	6-90-45 10-JAN-84 +/-error:	5.05E+01 3.46E+02	6.15E-01	
				26-JAN-84 +/-error:	2.19E+02 2.02E+02	1.15E-01	
				23-FEB-84 +/-error:	8.10E+03		
6-87-55 23-FEB-84 +/-error:	1.20E+05	8.90E+00		06-MAR-84 +/-error:	5.23E+03 4.95E+02	5.00E-01	
24-MAY-84 +/-error:	1.10E+05		1.70E+01	26-MAR-84 +/-error:	2.49E+02 3.51E+02	4.43E-01	
24-AUG-84 +/-error:	9.80E+04		1.60E+01	01-MAY-84 +/-error:	-5.67E+01 3.42E+02	1.33E+00	

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

@— SPECIFIC NITRATE ION METHOD

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01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>g</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>g</sup> (MG/L)
6-90-45 10-MAY-84 +/-error:	1.17E+02 3.32E+02	2.84E+00		6-96-49 01-MAR-84 +/-error:	2.20E+04	2.00E+01	
25-MAY-84 +/-error:	7.70E+03		6.80E+00	25-MAY-84 +/-error:	2.00E+04		
13-JUN-84 +/-error:	6.21E+02 3.62E+02	5.27E+00		29-MAY-84 +/-error:	3.10E+04		4.20E+01
09-JUL-84 +/-error:	-6.45E+00 3.39E+02	9.36E+00		30-AUG-84 +/-error:	2.70E+04		3.40E+01
09-AUG-84 +/-error:	1.06E+03 3.79E+02	8.10E+00		20-SEP-84 +/-error:	1.80E+04		2.40E+01
12-SEP-84 +/-error:	7.44E+02 3.59E+02	7.19E+00		14-DEC-84 +/-error:	2.10E+04		2.60E+01
20-SEP-84 +/-error:	7.10E+03			20-DEC-84 +/-error:	2.20E+04		3.30E+01
04-OCT-84 +/-error:	1.24E+03 3.81E+02	1.69E+01		6-97-43 07-FEB-84 +/-error:	4.03E+04 1.09E+03	1.42E+01	
05-NOV-84 +/-error:	1.54E+02 1.93E+02	1.72E+01		22-FEB-84 +/-error:	1.20E+04	1.60E+01	
29-NOV-84 +/-error:	7.20E+03 5.70E+02		8.80E+00	09-MAR-84 +/-error:	4.74E+04 1.17E+03	1.42E+01	
06-DEC-84 +/-error:	2.61E+02 2.22E+02	2.58E+01		02-APR-84 +/-error:	2.69E+04 8.94E+02	1.06E+01	
6-96-49 23-FEB-84 +/-error:	2.00E+04	1.30E+01		02-MAY-84 +/-error:	3.47E+04 2.66E+03	1.06E+01	

#— PHENOL DISULFONIC ACID METHOD

g— SPECIFIC NITRATE ION METHOD

#— PHENOL DISULFONIC ACID METHOD

g— SPECIFIC NITRATE ION METHOD

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9 2 1 2 3 3 2 1 0 3 4

01-JAN-84 TO 31-DEC-84

WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)	WELL NO. DATE	TRITIUM (PCI/L)	NITRATE <sup>#</sup> (MG/L)	NITRATE <sup>@</sup> (MG/L)
6-97-43 15-MAY-84 +/-error:	3.92E+04 2.88E+03	1.56E+01		6-97-51A 25-MAY-84 +/-error:	1.20E+04		1.60E+01
25-MAY-84 +/-error:	1.20E+04		1.50E+01	20-SEP-84 +/-error:	1.30E+04		1.90E+01
08-JUN-84 +/-error:	3.95E+05 3.28E+03	1.17E+02		14-DEC-84 +/-error:	1.80E+04		2.60E+01
02-JUL-84 +/-error:	6.94E+05 4.28E+03	7.11E+01		6-101-48B 25-MAY-84 +/-error:	4.20E+02 4.40E+02		1.60E+00
07-AUG-84 +/-error:	2.23E+05 5.63E+03	3.36E+01		14-DEC-84 +/-error:	3.10E+03 5.10E+02		3.10E+00
06-SEP-84 +/-error:	1.21E+05 4.32E+03	7.75E+00		20-SEP-84 +/-error:	1.10E+04	2.00E+01	
01-OCT-84 +/-error:	5.97E+04 3.25E+03	1.24E+01				4— PHENOL DISULFONIC ACID METHOD	
06-NOV-84 +/-error:	1.22E+05 4.53E+03	1.43E+01				6— SPECIFIC NITRATE ION METHOD	
04-DEC-84 +/-error:	1.55E+04 2.26E+03	1.53E+01					
13-DEC-84 +/-error:	1.40E+04		2.20E+01				
6-97-51A 23-FEB-84 +/-error:		1.30E+04	7.60E+00				

#— PHENOL DISULFONIC ACID METHOD

6— SPECIFIC NITRATE ION METHOD

**APPENDIX C**

**CHEMICAL AND SPECTROGRAPHIC ANALYSES  
FROM VARIOUS WELL SAMPLES ANALYZED  
BY THE U.S. GEOLOGICAL SURVEY**

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**Table C.1** Chemical and Spectrographic Analyses from Various Wells Sampled Between 6/4/84 and 6/7/84

Constituents	Units	Wells				
		699-26-15A	699-35-9	699-39-39	699-40-1	699-42-12
Alk. Tot. Lab.	mg/l	116	125	100	120	114
Aluminum	µg/l	<50	<50	<50	<50	<50
Antimony	µg/l	<30	<30	<30	<30	<30
Arsenic	µg/l	6	3	2	4	4
Barium	µg/l	50	70	50	70	70
Beryllium	µg/l	<1	<1	<1	<1	<1
Bicarbonate, field	mg/l	—	—	—	—	—
Bismuth	µg/l	<1,000	<1,000	<1,000	<1,000	<1,000
Boron	µg/l	30	30	50	30	30
Bromide	mg/l	.034	.040	.030	.043	.043
Cadmium	µg/l	<1	1	1	1	<1
Calcium	mg/l	49	46	23	44	43
Carbonate, field	mg/l	—	—	—	—	—
Carbon dioxide	mg/l	2.8	2.4	1.2	2.3	2.8
Chloride	mg/l	14	12	5.6	12	14
Chromium	µg/l	<50	<50	<50	<50	<50
Chromium hex.	µg/l	1	2	1	5	2
Cobalt	µg/l	<5	<5	<5	<5	<5
Color	Pt-Co	1	2	5	1	1
Copper	µg/l	<10	<10	<10	<10	<10
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoride	mg/l	0.4	0.4	0.3	0.4	0.4
Gallium	µg/l	<30	<30	<30	<30	<30
Germanium	µg/l	50	50	30	50	50
Hardness	mg/l	170	160	78	160	170
Hardness, noncarb.	mg/l	52	40	0	40	55
Iodide	mg/l	—	—	—	—	—
Iron	µg/l	10	7	30	7	10
Lead	µg/l	<30	<30	<30	<30	<30
Lithium	µg/l	10	10	10	10	10
Magnesium	mg/l	11	12	4.9	12	15
Manganese	µg/l	1	1	30	<1	3
Molybdenum	µg/l	<10	10	10	<10	<10
Nickel	µg/l	<50	<50	<50	<50	<50
Nitrogen (NO <sub>2</sub> as N)	mg/l	<.010	<.010	<.010	<.010	<.010
Nitrogen (NO <sub>2</sub> + NO <sub>3</sub> as N)	mg/l	10.0	7.60	.150	9.30	9.30
Nitrogen (NH <sub>4</sub> as N)	mg/l	.030	.030	.030	.020	.040
pH, field		7.9	8.0	8.2	8.0	7.9
Phosphorus, dissolved	mg/l	.010	.010	<.010	.020	.010
Potassium	mg/l	6.0	5.2	4.6	4.8	4.7
Solids, residue at 180°C	mg/l	301	270	186	280	312
Solids, sum of constit.	mg/l	260	240	190	240	270
Selenium	µg/l	2	2	<1	2	3
Silica	mg/l	36	33	30	38	39
Silver	µg/l	<10	<10	<10	<10	<10
Sodium	mg/l	24	20	28	18	25
Sodium adsorption ratio		0.8	0.7	1.0	0.6	0.9
Sodium percent		—	—	—	—	—
Sp conductance, field	µmhos	442	407	278	410	426
Strontium	µg/l	300	300	100	300	300
Sulfate	mg/l	51	34	35	36	56
Tin	µg/l	70	100	50	70	100
Titanium	µg/l	<5	<5	<5	<5	<5
Turbidity	NTU	.60	.80	1.6	.70	.50
Vanadium	µg/l	10	10	<10	10	10
Water temp.	°C	17.5	17.5	19.5	17.5	18.0
Zinc	µg/l	10	<9	<9	10	10
Zirconium	µg/l	<5	<5	<5	<5	<5
Cesium-137	pCi/l	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt-60	pCi/l	14	6.0	1.0	9.0	8.0
Gross Alpha, U-Nat	µg/l	12	8.7	<4.0	9.4	13
Gross Beta, Cs-137	pCi/l	51	25	6.1	37	33
Gross Beta, Sr/Y-90	pCi/l	44	22	5.3	32	28
Strontium-90	pCi/l	<0.4	<0.4	<0.4	<0.4	<0.4
Tritium	pCi/l	433,000	164,000	<200	234,000	322,000

Table C.1 Contd

Constituents	Units	Wells				
		699-45-42	699-47-46	699-50-53	699-40-42	699-53-47B
Alk. Tot. Lab.	mg/l	103	100	93	89	120
Aluminum	µg/l	<50	<50	<50	<50	<50
Antimony	µg/l	<30	<30	<30	<30	<30
Arsenic	µg/l	5	3	3	<1	<1
Barium	µg/l	30	50	30	50	30
Beryllium	µg/l	<1	<1	<1	<1	<1
Bicarbonate, field	mg/l	—	—	—	—	—
Bismuth	µg/l	<1,000	<1,000	<1,000	<1,000	<1,000
Boron	µg/l	30	30	30	30	10
Bromide	mg/l	<.010	.120	.350	.080	<.010
Cadmium	µg/l	<1	1	<1	<1	<1
Carbonate, field	mg/l	—	—	—	—	—
Carbon dioxide	mg/l	1.6	3.1	2.8	3.4	3.7
Chloride	mg/l	2.1	21	53	16	4.2
Chromium	µg/l	<50	<50	<50	<50	<50
Chromium hex.	µg/l	1	1	<1	<1	<1
Cobalt	µg/l	<5	<5	<5	<5	<5
Color	Pt-Co	2	3	3	25	3
Copper	µg/l	<10	<10	<10	<10	<10
Cyanide	mg/l	<.01	<.01	<.01	<.01	<.01
Fluoride	mg/l	0.6	0.5	0.4	0.5	0.2
Gallium	µg/l	<30	<30	<30	<30	<30
Germanium	µg/l	30	50	70	30	<30
Hardness	mg/t	92	170	230	110	120
Hardness, noncarb.	mg/t	0	65	140	19	1
Iodide	mg/l	—	—	—	—	—
Iron	µg/l	70	10	10	10	30
Lead	µg/l	<30	<30	<30	<30	<30
Lithium	µg/l	7	10	10	10	7
Magnesium	mg/t	9.0	14	18	9.2	9.4
Manganese	µg/l	10	<1	3	70	3
Molybdenum	µg/l	10	10	10	<10	<10
Nickel	µg/l	<50	<50	<50	<50	<50
Nitrogen (NO <sub>2</sub> as N)	mg/t	<.010	<.010	<.010	<.010	<.010
Nitrogen (NO <sub>2</sub> + NO <sub>3</sub> as N)	mg/t	1.20	3.20	5.40	.510	.180
Nitrogen (NH <sub>3</sub> as N)	mg/t	.040	.030	.030	.030	.020
pH field		8.1	7.8	7.8	7.7	7.8
Phosphorus, dissolved	mg/t	<.010	.010	.010	<.010	<.010
Potassium	mg/t	3.7	7.3	7.2	5.2	3.2
Solids, residue at 180°C	mg/t	190	313	395	196	171
Solids, sum of constit.	mg/t	180	290	360	200	160
Selenium	µg/l	<1	6	7	1	<1
Silica	mg/t	46	48	35	31	26
Silver	µg/l	<10	<10	<10	<10	<10
Sodium	mg/t	18	23	28	18	5.9
Sodium adsorption ratio		0.8	0.8	0.8	0.8	0.2
Sodium percent		—	—	—	—	—
Sp conductance field	µmhos	261	443	610	304	261
Strontium	µg/l	100	300	300	100	100
Sulfate	mg/t	20	76	97	35	9.7
Tin	µg/l	50	100	100	50	<50
Titanium	µg/l	<5	<5	<5	<5	<5
Turbidity	NTU	1.6	.80	.70	5.6	1.2
Vanadium	µg/l	30	30	10	<10	<10
Water temp.	°C	18.5	17.5	18.0	18.0	15.5
Zinc	µg/l	10	30	10	10	<9
Zirconium	µg/l	<5	<5	<5	<5	<5
Cesium-137	pCi/l	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt-60	pCi/l	<1.0	<1.0	4.0	<1.0	<1.0
Gross Alpha, U-Nat	µg/l	<4.3	<7.5	15	<5.1	11
Gross Beta, Cs-137	pCi/l	3.1	9.4	37	6.4	140
Gross Beta, Sr/Y-90	pCi/l	2.7	8.1	32	5.5	120
Strontium-90	pCi/l	<0.4	<0.4	<0.4	<0.4	60
Tritium	pCi/l	62,400	<200	<200	1,870	<200

Table C.1 Contd

Constituents	Units	Wells				
		699-54-34	699-55-50C	699-57-25A	699-57-29A	699-59-58
Alk. Tot. Lab.	mg/l	92	104	126	119	113
Aluminum	µg/l	<50	<50	<50	<50	<50
Antimony	µg/l	<30	<30	<30	<30	<30
Arsenic	µg/l	1	2	13	10	9
Barium	µg/l	70	10	10	30	10
Beryllium	µg/l	<1	<1	<1	<1	<1
Bicarbonate, field	mg/l	—	—	—	—	—
Bismuth	µg/l	<1,000	<1,000	<1,000	<1,000	<1,000
Boron	µg/l	30	30	30	30	30
Bromide	mg/l	.110	<.010	.030	.030	.010
Cadmium	µg/l	<1	<1	<1	<1	<1
Calcium	mg/l	27	31	24	23	21
Carbonate, field	mg/l	—	—	—	—	—
Carbon dioxide	mg/l	8.9	.0	1.9	.4	1.7
Chloride	mg/l	12	4.7	6.7	7.8	5.9
Chromium	µg/l	<50	<50	<50	<50	<50
Chromium hex.	µg/l	<1	<1	<1	<1	1
Cobalt	µg/l	10	<5	<5	<5	<5
Color	Pt-Co	20	<1	4	<1	3
Copper	µg/l	<10	<10	<10	<10	<10
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoxide	mg/l	0.7	0.2	0.5	0.4	1.3
Gallium	µg/l	<30	<30	<30	<30	<30
Germanium	µg/l	50	50	<30	<30	<30
Hardness	mg/l	120	110	90	85	80
Hardness, noncarb.	mg/l	25	9	0	0	0
Iodide	mg/l	—	—	—	—	—
Iron	µg/l	1,000	5	10	10	10
Lead	µg/l	<30	<30	<30	<30	<30
Lithium	µg/l	10	10	10	10	7
Magnesium	mg/l	12	8.7	7.3	6.7	6.8
Manganese	µg/l	100	1	3	<1	<1
Molybdenum	µg/l	<10	10	10	10	10
Nickel	µg/l	<50	<50	<50	<50	<50
Nitrogen (NO <sub>2</sub> as N)	mg/l	<.01	<.01	<.01	<.01	<.01
Nitrogen (NO <sub>2</sub> + NO <sub>3</sub> as N)	mg/l	3.40	.340	.850	.580	.210
Nitrogen (NH <sub>4</sub> as N)	mg/l	.040	.030	.050	.040	.040
pH, field		7.3	8.0	8.1	8.8	8.1
Phosphorus, dissolved	mg/l	<.010	.020	.030	.010	.020
Potassium	mg/l	4.4	4.0	5.6	6.9	5.1
Solids, residue at 180°C	mg/l	249	157	211	221	183
Solids, sum of constit.	mg/l	230	150	210	210	190
Selenium	µg/l	2	<1	1	<1	<1
Silica	mg/l	59	24	40	44	41
Silver	µg/l	<10	<10	<10	<10	<10
Sodium	mg/l	19	4.7	31	29	27
Sodium adsorption ratio		0.8	0.2	1.0	1.0	1.0
Sodium percent		—	—	—	—	—
Sp conductance field	µmhos	326	242	316	295	269
Strontium	µg/l	300	100	100	100	100
Sulfate	mg/l	36	15	22	22	15
Tin	µg/l	70	100	<50	<50	<50
Titanium	µg/l	<5	<5	<5	<5	<5
Turbidity	NTU	8.0	.50	1.6	1.3	.60
Vanadium	µg/l	30	10	30	30	30
Water temp.	°C	21.0	15.5	18.0	18.5	17.5
Zinc	µg/l	700	10	<9	<9	10
Zirconium	µg/l	<5	<5	<5	<5	<5
Cesium-137	pCi/l	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt-60	pCi/l	<1.0	<1.0	<1.0	<1.0	<1.0
Gross Alpha, U-Nat	µg/l	<5.9	<3.5	<5.1	<4.4	<4.4
Gross Beta, Cs-137	pCi/l	5.3	4.3	6.1	6.9	5.1
Gross Beta, Sr/Y-90	pCi/l	4.6	3.7	5.2	5.9	4.4
Strontium-90	pCi/l	0.4	0.4	<0.4	<0.4	<0.4
Tritium	pCi/l	<200	<200	<200	670	1,340

Table C.1 Contd

Constituents	Units	Wells				
		699-60-32	699-62-31	699-63-55	699-63-58	699-65-50
Alk. Tot. Lab.	mg/l	117	128	120	109	116
Aluminum	µg/l	<50	<50	<50	<50	<50
Antimony	µg/l	<30	<30	<30	<30	<30
Arsenic	µg/l	15	2	6	6	11
Barium	µg/l	10	50	10	10	10
Beryllium	µg/l	<1	<1	<1	<1	<1
Bicarbonate, field	mg/l	—	—	—	—	—
Bismuth	µg/l	<1000	<1000	<1000	<1000	<1000
Boron	µg/l	30	30	50	50	50
Bromide	mg/l	.020	.040	.010	.030	.020
Cadmium	µg/l	<1	<1	<1	<1	<1
Calcium	mg/l	28	35	21	23	24
Carbonate, field	mg/l	—	—	—	—	—
Carbon dioxide	mg/l	1.8	3.9	1.8	1.7	1.4
Chloride	mg/l	7.6	6.9	6.7	6.0	6.2
Chromium	µg/l	<50	<50	<50	<50	<50
Chromium hex.	µg/l	<1	<1	<1	<1	<1
Cobalt	µg/l	<5	<5	<5	<5	<5
Color	Pt-Co	<1	6	4	<1	3
Copper	µg/l	<10	<10	<10	<10	<10
Cyanide	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoride	mg/l	0.5	0.4	1.4	1.2	1.2
Gallium	µg/l	<30	<30	<30	<30	<30
Germanium	µg/l	30	30	30	<30	30
Hardness	mg/l	100	120	82	89	94
Hardness, noncarb.	mg/l	0	0	0	0	0
Iodide	mg/l	—	—	—	—	—
Iron	µg/l	7	50	10	5	5
Lead	µg/l	<30	<30	<30	<30	<30
Lithium	µg/l	10	10	10	7	7
Magnesium	mg/l	8.2	8.7	7.2	7.6	8.2
Manganese	µg/l	3	70	1	<1	<1
Molybdenum	µg/l	<10	<10	30	<10	10
Nickel	µg/l	<50	<50	<50	<50	<50
Nitrogen (NO <sub>2</sub> as N)	mg/l	<.01	<.01	<.01	<.01	<.01
Nitrogen (NO <sub>2</sub> + NO <sub>3</sub> as N)	mg/l	1.10	1.60	.240	3.00	.440
Nitrogen (NH <sub>4</sub> as N)	mg/l	.030	.030	.030	.030	.040
pH, field		8.1	7.8	8.1	8.1	8.2
Phosphorus, dissolved	mg/l	.010	.010	.010	.030	.010
Potassium	mg/l	4.3	5.0	5.4	5.0	4.8
Solids, residue at 180°C	mg/l	198	237	186	182	187
Solids, sum of constit.	mg/l	200	220	200	200	190
Selenium	µg/l	1	1	<1	<1	<1
Silica	mg/l	40	39	41	39	39
Silver	µg/l	<10	<10	<10	<10	<10
Sodium	mg/l	23	21	29	29	21
Sodium adsorption ratio		1.0	0.9	1.0	1.0	1.0
Sodium percent		—	—	—	—	—
Sp conductance field	µmhos	300	333	281	310	274
Strontium	µg/l	300	100	100	100	100
Sulfate	mg/l	21	30	17	22	17
Tin	µg/l	50	<50	70	<50	50
Titanium	µg/l	<5	<5	<5	<5	<5
Turbidity	NTU	.50	2.4	.60	.40	.50
Vanadium	µg/l	30	10	30	30	30
Water temp.	°C	18.0	17.5	17.0	17.0	17.5
Zinc	µg/l	30	300	10	50	<9
Zirconium	µg/l	<5	<5	<5	<5	<5
Cesium-137	pCi/l	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt-60	pCi/l	<1.0	<1.0	<1.0	<1.0	<1.0
Gross Alpha, U-Nat	µg/l	<5.6	<5.7	<5.2	<5.2	<4.8
Gross Beta, Cs-137	pCi/l	4.9	5.9	5.9	4.7	3.6
Gross Beta, Sr/Y-90	pCi/l	4.2	5.1	5.1	4.0	3.1
Strontium-90	pCi/l	<0.4	<0.4	<0.4	<0.4	<0.4
Tritium	pCi/l	1,090	<200	810	600	880

**APPENDIX D**

**SCHEDULED ROUTINE GROUND-WATER  
SAMPLES COLLECTED IN CY 1984**

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**APPENDIX D**  
**SCHEDULED ROUTINE GROUND-WATER SAMPLES**  
**COLLECTED IN CY 1984(a)**

**Frequency Symbols Used**

- M - Monthly
- Q - Quarterly
- SA - Semiannually
- A - Annually

**Analysis Symbols Used**

Cr - Cr<sup>6+</sup>

WQ - water quality analyses include: pH, conductance, Ca, Mg, Na, CO<sub>3</sub>, HCO<sub>3</sub>, K, B, NO<sub>3</sub>-N, Cl, SO<sub>4</sub>-S, and dissolved solids

Gamma Scan - analysis of gamma energy spectrum for individual gamma-emitting radionuclide including: <sup>22</sup>Na, <sup>60</sup>Co, <sup>65</sup>Zn, <sup>106</sup>Ru, <sup>131</sup>I and <sup>137</sup>Cs.

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(a) Appendix D taken from Blumer et al., 1983).

TABLE D.1. 100 Area Wells

Well Number	Sample Number	Sample Frequency	Analyses	Well Number	Sample Number	Sample Frequency	Analyses
(199) B3-1	1851	SA	$^{3}\text{H}$	N-4	1899	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
B3-2 P	1856	SA	$^{3}\text{H}$ , $\text{NO}_3$	N-5	1909	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
B3-2 Q	1857	SA	$^{3}\text{H}$ , $\text{NO}_3$	N-6	1901	Q SA	$^{3}\text{H}$ , Gamma Scan $^{90}\text{Sr}$
B4-1	1853	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-7	1910	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
B4-2	1854	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-14	1902	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
B4-3	1855	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-15	1903	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
B4-4	1891	SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	N-16	1915	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
B5-1	1895	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-17	1916	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
B9-1	1893	SA	$^{3}\text{H}$ , $\text{NO}_3$	N-18	1917	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
D2-5	1894	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-19	1918	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
D5-12	1892	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	N-20	1919	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
D8-3	1862	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-21	1920	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
F5-1	1865	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-22	1921	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
F5-3	1867	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-23	1922	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
F5-4	1868	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-24	1923	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
F5-6	1870	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-25	1924	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
F7-1	1871	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-26	1925	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
F8-1	1888	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-27	1926	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
F8-2	1889	Q	$^{3}\text{H}$ , $\text{NO}_3$	N-28	1927	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
H3-1	1890	Q	$^{3}\text{H}$ , U, Cr, F, $\text{NO}_3$ , Cu, Gamma Scan, Beta A WQ (analyzed by HEHF)	N-29	1928	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
H4-3	1877	Q	$^{3}\text{H}$ , U, Cr, F, $\text{NO}_3$ , Cu, Gamma Scan, Beta A WQ (analyzed by HEHF)	N-30	1929	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
H4-4	1878	Q	$^{3}\text{H}$ , U, Cr, F, $\text{NO}_3$ , Cu, Gamma Scan, Beta A WQ (analyzed by HEHF)	N-31	1930	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
H4-5	1873	Q	$^{3}\text{H}$ , U, Cr, F, $\text{NO}_3$ , Cu, Gamma Scan, Beta A WQ (analyzed by HEHF)	N-32	1931	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
H4-6	1874	Q	$^{3}\text{H}$ , U, Cr, F, $\text{NO}_3$ , Cu, Gamma Scan, Beta A WQ (analyzed by HEHF)	N-33	1932	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
K-11	1882	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ Gamma Scan	N-34	1933	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$
K-19	1884	Q	$^{3}\text{H}$ , $\text{NO}_3$				
K-20	1885	Q	$^{3}\text{H}$ , $\text{NO}_3$				
K-22	1887	Q	$^{3}\text{H}$ , $\text{NO}_3$				
K-27	1911	Q	$^{3}\text{H}$ , Gamma Scan				
K-28	1912	Q	$^{3}\text{H}$ , Gamma Scan				
K-29	1913	Q	$^{3}\text{H}$ , Gamma Scan				
K-30	1914	Q	$^{3}\text{H}$ , Gamma Scan				
N-2	1904	Q SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan $^{90}\text{Sr}$				
N-3(0)	1896	Q SA	$^{3}\text{H}$ , Gamma Scan $^{90}\text{Sr}$				

TABLE D.2. 200 Area Wells

Well Number	Sample Number	Sample Frequency	Analyses
(299) E19-1	2359	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E23-1	2553	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E24-7	2542	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E25-2	2554	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E26-1	2545	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E26-3	2365	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E27-1	2287	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E28-1	2555	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E28-5	2285	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E33-14	2297	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
E34-1	2549	M	$\text{NO}_3$
W6-1	2990	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W10-5	2890	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W11-9	2881	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W12-1	2883	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W15-2	2891	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W18-3	3011	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W19-4	2938	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W21-1	2930	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W22-7	3014	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W22-9	3013	Q	$^3\text{H}$ , $\text{NO}_3$ , Gamma Scan
W22-10	2906	Q	Alpha, $^{90}\text{Sr}$ , Gamma Scan

TABLE D.3. 300 Area Wells

Well Number	Sample Number	Sample Frequency	Analyses	Well Number	Sample Number	Sample Frequency	Analyses
(399) 1-1	4403	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	3-11	4628	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan, <sup>90</sup> Sr
1-2	4404	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	3-12	4870	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan, <sup>90</sup> Sr
1-3	4406	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	4-1	4410	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan
1-4	4407	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	4-7	4568	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan
1-5	4806	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan (to HEDL monthly)	4-9	4629	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan, <sup>90</sup> Sr
1-6	4837	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	4-10	4630	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan, <sup>90</sup> Sr
2-1	4402	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	5-1	4411	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan
2-2	4633	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	6-1	4409	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan,
2-3	4634	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	8-1	4405	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan,
3-1	4401	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	8-2	4408	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan,
3-2	3033	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	8-3	4412	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan,
3-3	3034	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan	8-4	4865	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan,
3-6	3031	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan				
3-7	4839	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan				
3-9	4626	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan, <sup>90</sup> Sr				
3-10	4627	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan, <sup>90</sup> Sr				

TABLE D.4. 400 Area Wells

Well Number	Sample Number	Sample Frequency	Analyses
(499) SO-7	4817	Q	<sup>3</sup> H, NO <sub>3</sub> , Gamma Scan
SO-8	4818	Q	<sup>3</sup> H, NO <sub>3</sub> , Gamma Scan
S1-7B	4819	Q	<sup>3</sup> H, NO <sub>3</sub> , Gamma Scan
S1-7C	4877	Q	<sup>3</sup> H, Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan
S1-8A	4878	Q	<sup>3</sup> H, Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan
S1-8B	4879	Q	Beta, NO <sub>3</sub> , U, Cr, F, Gamma Scan

TABLE D.5. 600 Area Wells

Well Number	Sample Number	Sample Frequency	Analyses	Well Number	Sample Number	Sample Frequency	Analyses
(699) S3-25	4787	Q A	$^{3}\text{H}$ , $\text{NO}_3$ WQ (analyzed by HEHF)	(699) 14-38	4527	Q A	$^{3}\text{H}$ , $\text{NO}_3$ WQ (analyzed by HEHF)
S3-E12	4553	Q A	$^{3}\text{H}$ , $\text{NO}_3$ WQ (analyzed by HEHF)	14-47	4608	Q A	$^{3}\text{H}$ , $\text{NO}_3$ WQ (analyzed by HEHF)
S6-E4 B	4502	Q	$^{3}\text{H}$ , $\text{NO}_3$ , U	15-15 B	4810	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
S6-E4 D	4504	Q	$^{3}\text{H}$ , $\text{NO}_3$ , U	15-26	4464	Q A	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan WQ (analyzed by HEHF)
S6-E14	4580	Q	$^{3}\text{H}$ , $\text{NO}_3$	17-5	4422	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
S7-34	4427	Q	$^{3}\text{H}$ , $\text{NO}_3$	17-47	4530	Q	$^{3}\text{H}$ , $\text{NO}_3$ (Test instrument in well—not sampled in 1984)
S8-19	4421	Q	$^{3}\text{H}$ , $\text{NO}_3$				
S11-E12A(0)	4552	Q	$^{3}\text{H}$ , $\text{NO}_3$	17-70	4531	Q	$^{3}\text{H}$ , $\text{NO}_3$
S11-E12A(P)	4747	Q	$^{3}\text{H}$ , $\text{NO}_3$	19-43	4417	Q A	$^{3}\text{H}$ , $\text{NO}_3$ WQ (analyzed by HEHF)
S12-3	4424	Q	$^{3}\text{H}$ , $\text{NO}_3$				
S12-29	4592	Q	$\text{NO}_3$	19-58	4528	Q	$\text{NO}_3$
S14-20 A	4535	Q	$\text{NO}_3$	19-88	4522	Q	$\text{NO}_3$
S18-51	4852	Q	$\text{NO}_3$ , F	20-E5 A	4838	Q A	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan WQ (analyzed by HEHF)
S19-11	4780	SA	$\text{NO}_3$				
S19-E13	4802	Q A	$\text{NO}_3$ , F, U WQ (analyzed by HEHF)	20-E5 P	4705	Q	$^{3}\text{H}$ , $\text{NO}_3$
S24-19	4510	SA	$\text{NO}_3$ (no samples collected from this well in 1984)	20-E5 Q	4706	Q	$^{3}\text{H}$ , $\text{NO}_3$
				20-E5 R	4707	Q	$^{3}\text{H}$ , $\text{NO}_3$
				20-E12(0)	4567	Q	$^{3}\text{H}$ , $\text{NO}_3$ (Dry in 1984—not sampled)
S27-E14	4413	M	$\text{NO}_3$ , U, F, Cr	20-E12 P	4611	Q	$^{3}\text{H}$ , $\text{NO}_3$
S28-E0	4764	Q	$^{3}\text{H}$ , $\text{NO}_3$	20-20	4418	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
S29-E12	4803	Q	$\text{NO}_3$ , F, U	20-39	4559	Q A	$^{3}\text{H}$ , $\text{NO}_3$ Gamma Scan
S30-E15 A	4804	Q	$\text{NO}_3$ , F, U, Cr				
S31-1 (P)	4745	Q A	$^{3}\text{H}$ , $\text{NO}_3$ WQ (analyzed by HEHF)	20-82	4529	Q	$^{3}\text{H}$ , $\text{NO}_3$
1-18	4513	Q	$^{3}\text{H}$ , $\text{NO}_3$	21-6	4855	M	$^{3}\text{H}$ , $\text{NO}_3$
2-3	4423	M Q A	$^{3}\text{H}$ , $\text{NO}_3$ Gamma Scan WQ (analyzed by HEHF)	22-70	4595	M A	$^{3}\text{H}$ , $\text{NO}_3$ Gamma Scan
2-7	4758	A	WQ (analyzed by HEHF)	24-1 P	4710	Q	$^{3}\text{H}$ , $\text{NO}_3$
2-33	4526	A	$^{3}\text{H}$ , $\text{NO}_3$	24-1 Q	4711	Q	$^{3}\text{H}$ , $\text{NO}_3$
3-45	4593	Q SA	$\text{NO}_3$ $^{3}\text{H}$	24-1 R	4712	Q	$^{3}\text{H}$ , $\text{NO}_3$
				24-1 S	4713	Q	$^{3}\text{H}$ , $\text{NO}_3$
4-E6	4620	Q	$^{3}\text{H}$ , $\text{NO}_3$	24-1 T	4709	Q	$^{3}\text{H}$ , $\text{NO}_3$
8-17	4426	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	24-33	4416	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
8-25	4788	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	24-46	4525	Q	$^{3}\text{H}$ , $\text{NO}_3$
8-32	4420	Q	$^{3}\text{H}$ , $\text{NO}_3$	25-55	4415	Q	$^{3}\text{H}$ , $\text{NO}_3$
9-E2	4519	Q	$^{3}\text{H}$ , $\text{NO}_3$	25-70	4452	SA A	$^{3}\text{H}$ , $\text{NO}_3$ WQ (analyzed by HEHF)
10-E12	4581	Q	$^{3}\text{H}$ , $\text{NO}_3$	26-15 A	4518	Q A	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan WQ (analyzed by HEHF)
10-54 A	4428	A	WQ (analyzed by HEHF)	26-89	4598	SA A	$\text{NO}_3$ WQ (analyzed by HEHF)
12-4 B	4425	SA	Gamma Scan				
13-64	4429	Q	$^{3}\text{H}$ , $\text{NO}_3$	27-8	4557	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
14-E6 T	4766	Q	$^{3}\text{H}$ , $\text{NO}_3$	28-40(0)	4481	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan

TABLE D.5. 600 Area Wells (Continued)

Well Number	Sample Number	Sample Frequency	Analyses	Well Number	Sample Number	Sample Frequency	Analyses
(699) 28-40 P	4754	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	(699) 40-1	4566	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan, WQ (analyzed by HEHF)
28-52 A	4521	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan			A	
29-4	4857	M	$^{3}\text{H}$ , $\text{NO}_3$	40-33 A	4431	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan, WQ
29-78	4594	Q	$^{3}\text{H}$ , $\text{NO}_3$	40-62	4458	Q	$^{3}\text{H}$ , $\text{NO}_3$
31-31 (0)	4471	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	41-1	4858	M	$^{3}\text{H}$ , $\text{NO}_3$
31-31 P	4738	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	41-23	4430	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
31-53B	4520	SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	42-2	4859	M	$^{3}\text{H}$ , $\text{NO}_3$
		A	WQ (analyzed by HEHF)	42-12 A	4517	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
32-22	4794	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	43-3	4861	M	$^{3}\text{H}$ , $\text{NO}_3$
32-43	4778	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	43-88	4836	Q	$^{3}\text{H}$ , $\text{NO}_3$
32-62	4550	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Alpha	44-64	4548	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
32-70 B	4492	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	44-4	4862	M	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
32-72	4491	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	45-2	4872	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
32-77	4446	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	45-42	4450	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
33-42	4779	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan			A	WQ (analyzed by HEHF)
33-56	4523	Q	Alpha, $^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	45-69 A	4449	Q	$^{3}\text{H}$ , $\text{NO}_3$
						SA	Gamma Scan
34-39 A	4448	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan			A	WQ (analyzed by HEHF)
34-41 B	4789	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	46-4	4863	M	$^{3}\text{H}$ , $\text{NO}_3$
34-42	4790	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	46-21 B	4479	Q	$^{3}\text{H}$ , $\text{NO}_3$
		A	WQ (analyzed by HEHF)	47-5	4864	M	$^{3}\text{H}$ , $\text{NO}_3$
34-51	4414	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	47-35	4478	Q	$^{3}\text{H}$ , $\text{NO}_3$
34-88	4439	Q	$^{3}\text{H}$ , $\text{NO}_3$	47-46A	4564	Q	$^{3}\text{H}$ , $\text{NO}_3$
35-9	4419	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan			SA	Gamma Scan
35-66	4494	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	47-60	4434	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
35-70	4441	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	48-7	4756	Q	$^{3}\text{H}$ , $\text{NO}_3$
		A	WQ (analyzed by HEHF)	48-18	4850	Q	$^{3}\text{H}$ , $\text{NO}_3$
36-46 P	4751	Q	$^{3}\text{H}$ , $\text{NO}_3$	48-71	4487	Q	$^{3}\text{H}$ , $\text{NO}_3$
		SA	Gamma Scan	49-13 E	4771	Q	$^{3}\text{H}$ , $\text{NO}_3$
36-46 Q	4752	Q	$^{3}\text{H}$ , $\text{NO}_3$			A	WQ (analyzed by HEHF)
		SA	Gamma Scan	49-28	4816	Q	$^{3}\text{H}$ , $\text{NO}_3$
36-61 A	4447	Q	$\text{NO}_3$	49-55 A	4562	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
36-61 B	4549	Q	$^{3}\text{H}$ , $\text{NO}_3$	49-57	4485	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
36-93	4579	SA	$^{3}\text{H}$ , $\text{NO}_3$	49-79	4443	Q	$^{3}\text{H}$ , $\text{NO}_3$
		A	WQ (analyzed by HEHF)	50-28 B	4844	Q	$^{3}\text{H}$ , $\text{NO}_3$
37-E4	4876	M	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma	50-53	4473	Q	$^{3}\text{H}$ , $\text{NO}_3$
37-43	4480	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan			A	WQ (analyzed by HEHF)
37-82 A	4554	Q	$^{3}\text{H}$ , $\text{NO}_3$	50-30	4451	Q	$^{3}\text{H}$ , $\text{NO}_3$
38-15	4880	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	50-42	4460	Q	$^{3}\text{H}$ , $\text{NO}_3$
38-65	4546	Q	$^{3}\text{H}$ , $\text{NO}_3$	50-53	4473	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan
		SA	Gamma Scan			A	WQ (analyzed by HEHF)
38-70	4493	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	50-85	4497	Q	$^{3}\text{H}$ , $\text{NO}_3$
39-0	4871	M	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	51-63	4488	Q	$^{3}\text{H}$ , $\text{NO}_3$
39-39	4791	SA	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan	51-75	4496	Q	$^{3}\text{H}$ , $\text{NO}_3$
39-79	4444	Q	$^{3}\text{H}$ , $\text{NO}_3$ , Gamma Scan				

TABLE D.5. 600 Area Wells (Continued)

Well Number	Sample Number	Sample Frequency	Analyses	Well Number	Sample Number	Sample Frequency	Analyses
(699) 52-19	4776	SA	NO <sub>3</sub>	(699) 64-62	4824	Q	<sup>3</sup> H, NO <sub>3</sub>
53-35	4637	Q	<sup>3</sup> H, NO <sub>3</sub>	65-23	4851	SA	<sup>3</sup> H, NO <sub>3</sub>
		A	Gamma Scan	65-50	4477	Q	<sup>3</sup> H, NO <sub>3</sub>
53-103	4772	Q	<sup>3</sup> H, NO <sub>3</sub>	65-59	4532	Q	<sup>3</sup> H, NO <sub>3</sub>
54-34	4638	Q	<sup>3</sup> H, NO <sub>3</sub>	65-72	4468	Q	<sup>3</sup> H, NO <sub>3</sub>
54-37 A	4853	Q	<sup>3</sup> H, NO <sub>3</sub>	65-83	4775	Q	<sup>3</sup> H, NO <sub>3</sub>
54-42	4432	Q	NO <sub>3</sub>	66-23	4547	Q	NO <sub>3</sub>
		SA	<sup>3</sup> H	66-38	4586	Q	NO <sub>3</sub>
54-45 A	4811	Q	<sup>3</sup> H, NO <sub>3</sub>	66-39	4812	Q	NO <sub>3</sub>
55-40	4639	Q	<sup>3</sup> H, NO <sub>3</sub>	66-58	4821	Q	<sup>3</sup> H, NO <sub>3</sub>
55-44	4640	Q	<sup>3</sup> H, NO <sub>3</sub>	66-64	4820	Q	<sup>3</sup> H, NO <sub>3</sub>
55-50(AC)	4433	Q	<sup>3</sup> H, NO <sub>3</sub>	66-103	4587	SA	<sup>3</sup> H, NO <sub>3</sub>
55-50 C	4483	Q	<sup>3</sup> H, NO <sub>3</sub>			A	Gamma Scan
		SA	Gamma Scan			A	WQ (analyzed by HEHF)
		A	WQ (analyzed by HEHF)	67-51	4561	Q	<sup>3</sup> H, NO <sub>3</sub>
55-50 D	4484	Q	<sup>3</sup> H, NO <sub>3</sub>	67-86	4585	Q	<sup>3</sup> H, NO <sub>3</sub>
55-70	4442	Q	<sup>3</sup> H, NO <sub>3</sub>	67-98	4556	Q	<sup>3</sup> H, NO <sub>3</sub>
55-76	4533	Q	NO <sub>3</sub>	68-105	4588	SA	<sup>3</sup> H, NO <sub>3</sub>
55-89	4453	Q	NO <sub>3</sub>			A	Gamma Scan
56-43	4650	Q	<sup>3</sup> H, NO <sub>3</sub>	69-38	4461	Q	<sup>3</sup> H, NO <sub>3</sub>
57-25 A	4856	Q	<sup>3</sup> H, NO <sub>3</sub>	70-68	4455	SA	<sup>3</sup> H, NO <sub>3</sub>
57-29 A	4462	Q	<sup>3</sup> H, NO <sub>3</sub>	71-30	4490	SA	<sup>3</sup> H, NO <sub>3</sub>
57-83	4558	Q	NO <sub>3</sub>	71-52	4454	Q	<sup>3</sup> H, NO <sub>3</sub>
58-24	4652	Q	<sup>3</sup> H, NO <sub>3</sub>	71-77	4584	SA	<sup>3</sup> H, NO <sub>3</sub>
59-32	4815	Q	<sup>3</sup> H, NO <sub>3</sub>			A	WQ (analyzed by HEHF)
59-58	4827	Q	<sup>3</sup> H, NO <sub>3</sub>	72-73	4569	SA	<sup>3</sup> H, NO <sub>3</sub>
		A	WQ (analyzed by HEHF)	72-88	4465	Q	<sup>3</sup> H, NO <sub>3</sub>
59-80 B	4437	Q	NO <sub>3</sub>			A	WQ (analyzed by HEHF)
60-32	4814	Q	<sup>3</sup> H, NO <sub>3</sub>	72-92	4565	SA	<sup>3</sup> H, NO <sub>3</sub>
60-57	4826	Q	<sup>3</sup> H, NO <sub>3</sub>	72-98	4463	SA	<sup>3</sup> H, NO <sub>3</sub>
60-60	4435	Q	<sup>3</sup> H, NO <sub>3</sub>	73-61	4583	Q	<sup>3</sup> H, NO <sub>3</sub>
61-37	4694	Q	NO <sub>3</sub>	74-44	4516	Q	<sup>3</sup> H, NO <sub>3</sub>
61-41	4653	Q	<sup>3</sup> H, NO <sub>3</sub>	77-36	4500	Q	<sup>3</sup> H, NO <sub>3</sub>
61-62	4825	Q	<sup>3</sup> H, NO <sub>3</sub>	77-54	4512	Q	NO <sub>3</sub>
61-66	4474	Q	<sup>3</sup> H, NO <sub>3</sub>	78-62	4511	SA	NO <sub>3</sub>
62-31	4813	Q	NO <sub>3</sub>			A	WQ (analyzed by HEHF)
62-43 F	4537	Q	<sup>3</sup> H, NO <sub>3</sub>	80-43 P	4760	SA	NO <sub>3</sub>
63-25	4499	Q	<sup>3</sup> H, NO <sub>3</sub>	80-43 Q	4761	SA	NO <sub>3</sub>
63-51	4845	SA	<sup>3</sup> H, NO <sub>3</sub>	80-43 R	4762	SA	NO <sub>3</sub>
63-55	4823	Q	<sup>3</sup> H, NO <sub>3</sub>	80-45 S	4763	SA	NO <sub>3</sub>
63-58	4822	Q	<sup>3</sup> H, NO <sub>3</sub>	81-58	4597	Q	<sup>3</sup> H, NO <sub>3</sub>
63-90	4436	Q	<sup>3</sup> H, NO <sub>3</sub>			A	WQ (analyzed by HEHF)
		A	WQ (analyzed by HEHF)	83-47	4515	SA	<sup>3</sup> H
64-27	4599	Q	NO <sub>3</sub>			SA	<sup>3</sup> H, NO <sub>3</sub>
		SA	<sup>3</sup> H	84-35A(0)	4596	SA	<sup>3</sup> H, NO <sub>3</sub>
		A	WQ (analyzed by HEHF)				

TABLE D.5. 600 Area Wells (Continued)

Well Number	Sample Number	Sample Frequency	Analyses	Well Number	Sample Number	Sample Frequency	Analyses
(699) 87-55	4792	Q A	$^3\text{H}$ , $\text{NO}_3$ WQ (analyzed by HEHF)	(699) 96-49	4591	Q	$^3\text{H}$ , $\text{NO}_3$
89-35	4571	Q A	$\text{NO}_3$ WQ (analyzed by HEHF)	97-43	4590	Q	$^3\text{H}$ , $\text{NO}_3$
90-45	4770	Q SA	$^3\text{H}$ $\text{NO}_3$	97-51 A	4728	Q	$^3\text{H}$ , $\text{NO}_3$
				101-48 B	4846	SA	$^3\text{H}$ , $\text{NO}_3$

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